## NOVEMBER 4, 1944

Founded in 1856

MORE THAN

ANY





# Better

STANDARD ON MOST ROADS

Schaefer Light Weight Design Insures more than Car Life

> When your freight car repair program is under consideration you can be certain that Schaefer Service will meet your delivery requirements.

There is a Schaefer **Truck Lever Connection** to fit every brake service TENDER LOCOMOTIVE FREIGHT

INTERURBAN

in sizes from 11/8-inch to 1%-inch pin holes.

EQUIPMENT COMPANY

LOOP. "U" AND STIRRUP TYPE BRAKE BEAM HANGERS ... TRUCK, CYLINDER AND FLOATING LEVERS TRUCK LEVER CONNECTIONS ... BRAKE ROD JAWS ... WEAR PLATES ... BRAKE SHOE KEYS

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price \$6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 117, No. 19.



Defore you install new train-line pipe on freight cars undergoing repair, investigate Ammonoduct. For this time-tried pipe, developed by Bethlehem, is easy to install, gives long service, and resists fatigue failure caused by

Ammonoduct is made of a special-quality open-hearth steel which is highly ductile, and withstands the shock and vibration stresses encountered in long-continued highspeed operation. The superior steel of which it is made gives it great resistance to embrittlement and fatigue

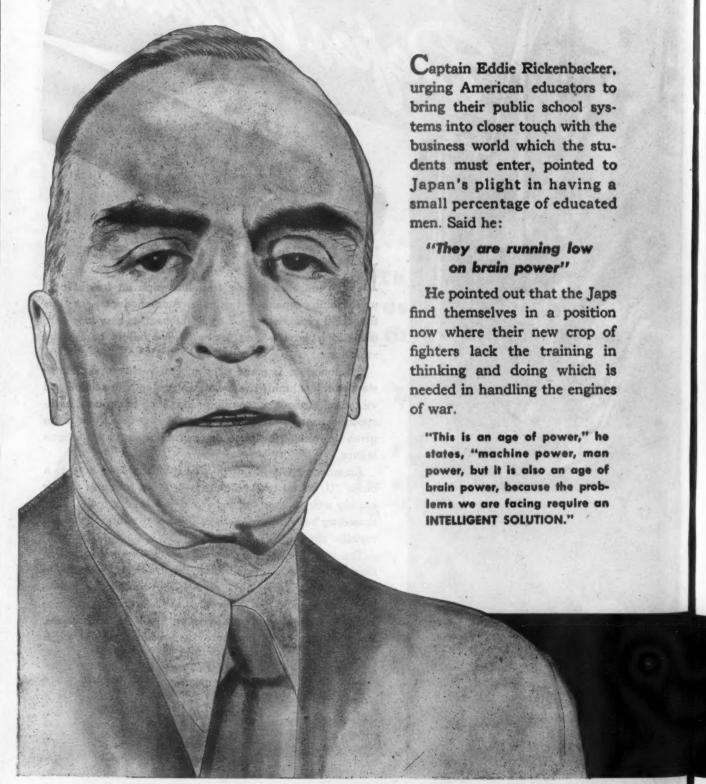
Ammonoduct is so ductile that it can be cold-bent to a close "U," then restraightened-without fracture! It is a readily welded grade of pipe, and is ideal for quick, easy threading because of the cleanliness and uniformity of the

You can obtain Ammonoduct in any nominal pipe size from 1/2 in. to 3 in., standard and extra-strong weights, to specifications AAR M-111 or ASTM A-53. On all orders for train-line pipe and other auxiliary train-piping, be sure to specify Ammonoduct. Even with all its advantages, Ammonoduct costs no more than ordinary steel pipe.



then he said to himself

#### "They're Short on Brains"



#### "INTELLIGENT SOLUTION," he says

LOOK, CAPTAIN, how recourse to Arc Welding affords an intelligent solution to a railroad maintenance problem (typical of thousands):

#### HEADWORK ON A BRAKEHEAD



THE LINCOLN ELECTRIC COMPANY . Cleveland 1, Ohio

ARC WELDING

## Flame

#### **QUICKLY AND** ECONOMICALLY PREPARES BRIDGES FOR REPAINTING

Flame cleaning of exposed steel surfaces in preparation for maintenance painting has helped many railroads overcome the wartime labor shortage—and, at the same time, pointed the way to lower costs and longer paint life on bridges, signal towers, tanks and steel cars.

Quickly and easily applied by means of torches and special tips developed by Airco, the oxyacetylene flame burns off most, if not all, of the old paint and loosens the scale and rust.

The surface, after wire brushing, is free of all loose material. The flame also dries the surface moisture providing ideal conditions for repainting. R. A.

For complete information on Air the process-and suggested Reduction 60 East 42nd St. specifications covering New York 17, N.Y. all types of work, mail Gentlemen: Please send me a copy the coupon for of Flame Cleaning Folder copy of folder ADG 1066A.

Title

Flame Cleaning Lccd-web member. Flame easily reaches hard-to-get-at places. After flame cleaning, the structure is now seady for application of the paint coat. Before and after. Left side of place shows conditions encountered. Right side

shows section after flame cleaning and wire brushing.



ADG 1066A.

#### IR KEDUCTION

General Offices: 60 EAST 42nd STREET, MEN YORK 17, M. Y. OLIA AIRCO GAS PRODUCTS CO. . General Offices:

Offices in all Principal Cities

Address

#### JOHNNY GEESMAN'S PIN-UP TRAIN

Johnny Geesman loved trains with a kid's love for a shiny new fishing pole—a love of affection, yes, but a love that had pride and thrill and possession in it, too.

Johnny lived beside the Milwaukee Road near Cedar Rapids, Iowa. His bedroom, moved to the attic that he might better watch the Milwaukee's Arrow fly past, was a boy's treasure land of pictures of mighty locomotives and streamliners-Galahads and Launcelots in twentieth century armor.

Why, for Johnny Goesman there never was a day like the day the Milwaukee's new streamliner, the Midwest Hiawatha, made her trial run. Johnny couldn't bear to miss it—and he skipped school just that once to see it roll by. Ever after, the Hiawatha was his favorite.

The boy grew older, and a war came . . . and pretty soon it was Radioman John Geesman, U. S. N. One day from the Aleutians came a letter to his mother-"How is my pet Hiawatha coming along? Don't tell me—I know. Right on the dot, every night its muffled air horn suddenly changes to a clear sharp blast as it rushes under the famous Louisa viaduct, and the many onlookers, lined up from Chicago to Omaha, thrill to the sight of this brilliant splash of orange, grav, and maroon as it flies down the main line. . . . "

Months later another letter, now from the Marianas.

"I saved that picture of my pet streamliner at Western Avenue," Johnny wrote, "so that whenever I get homesick I just break it out."

His proud mother told the story in a simple letter to the Milwaukee, and today Milwaukee railmen are looking forward to the day when they can give Johnny Geesman the thrill he must have dreamed of times without number as a boy-a ride in the cab of a Hiawatha locomotive!

Johnny Goesman's story is the story of one boy's accolade to a great American institution—the railroad. America is full of Johnny Geesmans who are serving their country in foreign lands, and U. S. railroaders are keeping faith with them by doing the greatest war transport job the world has ever seen.

-The Trackwalker\*

At the rate of four cars a minute, Alco-G.E. diesel-electrics are helping to hump more than 2,000,000 cars a year in a large midwestern yard. They have helped reduce the interval between car arrival and departure to less than one hour, and they save \$61,000 a year in fuel costs alone.

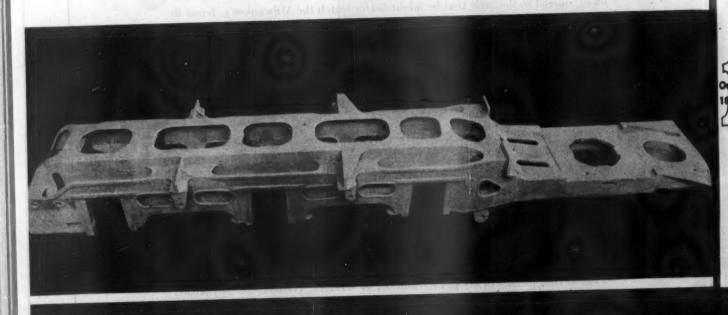
AMERICAN LOCOMOTIVE . GENERAL ELECTRIC

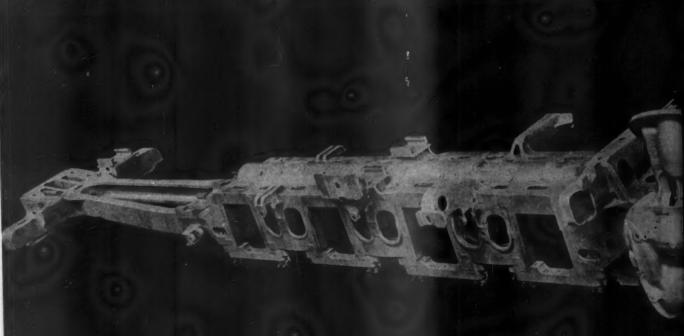
Copr., 1944, American Locomotive Company and General Electric Company Reg. U.S. Pat. Off.

AGE

### TWENTY YEARS

Have Produced





GENERAL STEEL

#### SOF PROGRESS

## the COMMONWEALTH LOCOMOTIVE BED of Today

Original Logomative Res. Weight

Commonwealth Locametive Bed of lates design with Cradle, Cylinders and All Reservoirs Cast Integral; Weight 70,000 lbs. Length \$4' 0".



Since 1924, great strides have been made, not only in design, but in the technique of manufacture, including the art of moulding these intricate castings, in producing better steel, and in machining to closer tolerances. The result is the COMMONWEALTH CAST STEEL LOCOMOTIVE BED of today that gives you all of these advantages, and more:

- Greater strength with less weight
- Elimination of many separate parts and hundreds of bolts
- Permanent alignment of frame and cylinders
- Simplified locomotive design and construction
- Reduced maintenance costs.

Today, COMMONWEALTH ONE-PIECE BEDS are standard on practically all modern steam and electric locomotives. Over 4,900 COMMONWEALTH Locomotive Beds are now in service on or on order for the railroads of the world.

LOCOMOTIVES EQUIPPED WITH COMMON-WEALTH BEDS SPEND MORE TIME ON THE ROAD—LESS TIME IN REPAIR SHOPS.



CASTINGS EDDYSTONE, PA.

#### Prevent Rust, Avoid Corrosion



### with PRESSTITE Asphalt Waterproofing Mastic

Particularly adapted to the prevention of rust and corrosion of railroad equipment while in storage, Presstite Asphalt Waterproofing Mastic (No. 2390) is being used by America's leading railroads.

Designed for brush or spray application, this Presstite compound is a special asphaltic jell, cut-back type, furnished ready for use, and a very fast drier. It dries to a rubber-like, elastic film free from tack.

Protect your parts in storage — castings, trucks, wheels, and many other pieces of equipment—against destructive rust and corrosion with this specialized Presstite product. One of the largest roads in the country uses many thousands of gallons per year for this purpose.

Presstite sealing and coating compounds include many diverse types, each developed to meet a particular requirement. Send us your requirements and let our sealing specialists work with your engineers.



PRESSTITE ENGINEERING COMPANY

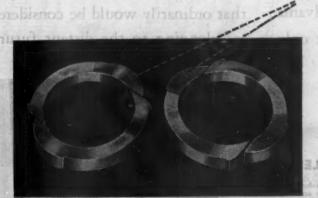
3954 Chouteau Avenue, St. Louis 10, Missouri

The

## the Genuine Segments & Parts

Don't take chances with substitute segments and parts on P-M Piston and Valve Stem Packing installations. Peak performance is assured only when genuine P-M Segments and parts are used. and parts!

Each segment bears the Paxton-Mitchell P-M trade-mark. Segments are made of special metals which withstand the extreme pressures of today's operating conditions, without interfering with the take-up of wear. Springs are made of special alloy heat-resisting steel. Look for the P-M trademark!



Smaller stocks of renewal parts are necessary, too, and ordering is simplified because P-M parts are interchangeable for each size rod. Use genuine P-M Segments

#### PAXTON-MITCHELL COMPANY

P-M Metallic Rod Packing . P-M Iron and Bronze Castings

2614 Martha Street \* Omaha 5, Nebraska Export Department - for Metallic Packing INTERNATIONAL RAILWAY SUPPLY CO. 30 Church Street \* New York 7. New York

Although we are now engaged in the production of other war necessary materials, we have been able to maintain our output of P-M Metallic Packing to meet the demands of today's wartime railroad operating conditions. Call on us to supply your packing requiréments.

The Packing that Packs



Metallic Rod Packing

FUNCTION OF THE TRAIN

## TRAINS THAT

by Induction

#### P. R. R. Orders Million Dollar Installation for two Main Line Divisions . . . Harrisburg to Pittsburgh

Instantaneous and continuous telephone communication between moving trains and wayside towers, between engine and caboose, between train and train is now a reality... thoroughly tested and proved. Soon it will be a fact on two of the busiest divisions of the Pennsylvania Railroad.

This great advance in railroading has been in experimental operation on a branch of the Pennsylvania Railroad for two years...not only to find possible improvements, but to learn the best ways of applying it more widely.

The induction telephone is one of the many far-reaching improvements brought about by the Pennsylvania Railroad's never-ending search for new things and better ways. It is tangible evidence of the spirit of tomorrow that today is at work in railroading . . . perfecting and applying ideas and inventions that ordinarily would be considered as belonging to the distant future.

#### **FUNCTION OF THE TRAIN TELEPHONE**

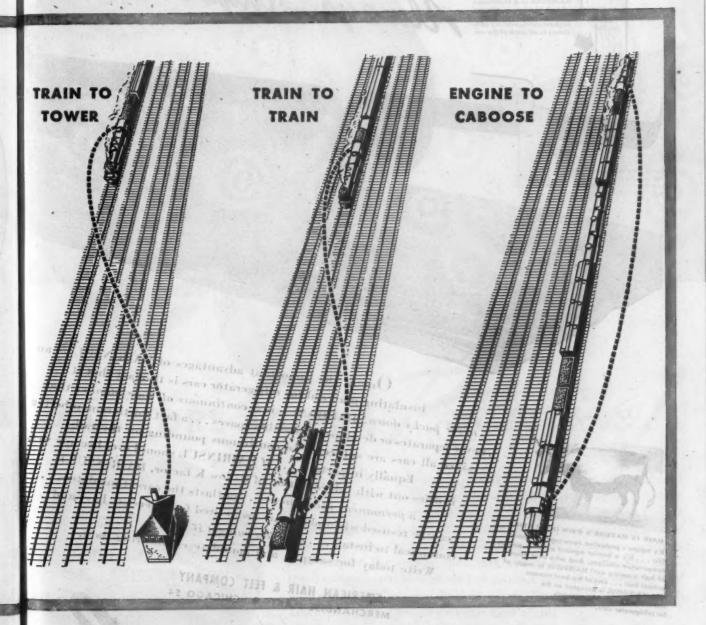
The train telephone is not intended to replace established methods of conveying instructions to trains. Rather, it becomes an auxiliary to established signaling, communications and safety devices, making them more effective by giving all who are involved in train operation more thorough and quicker information as to what is happening on the line.

Main Line Divisions of P.R.R. have long been equipped with every proved device for safety, signaling and communication. Included are automatic block signals, signals in the locomotive cabs, interlocking plants, power-operated and electrically-locked switches, dragging equipment detectors, slide protection fences, universal track circuits, telephones at signals, switches and strategic locations, teletypewriter networks, facsimile apparatus for transmission of train orders, and centralized traffic control.



### TALK ON THE RUN

Telephone!



BUY UNITED STATES WAR BONDS AND STAMPS

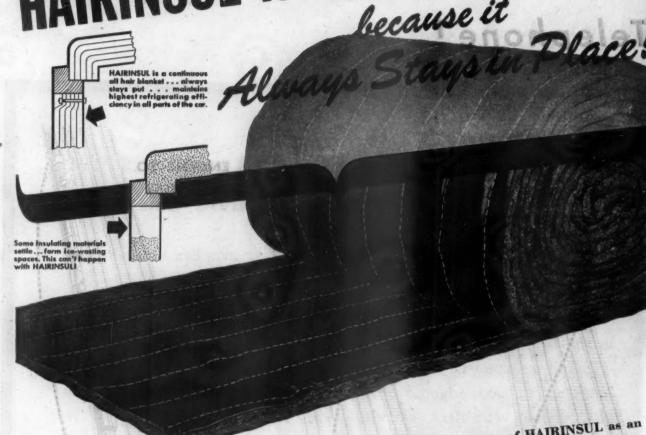
#### Pennsylvania Railroad

Serving the Nation

# 49,625 entered the Armed Porce

to 408 have given their lives for their Country

HAIRINSUL is Better Insulation

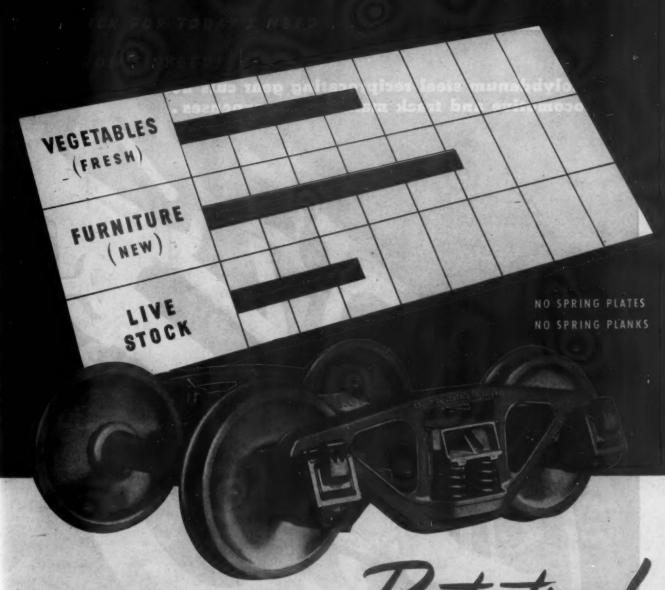




MAIR IS NATURE'S OWN INSULATION
It's nature's protective covering for enimal
Ife . . It's a barrier against extreme outside
Imperature changes. And who ever heard
of heir weering out HAIRINSUL is made of
immal heir . . one of the best reasons
why HAIRINSUL is accepted as the
nest of all insulating materials
or refrigerator care.

AMERICAN HAIR & FELT COMPANY MERCHANDISE MART • CHICAGO 54

ACCUMUS STATE STAT



### FOR MORE LADING Protection,



ng

Although the past twenty years of freight transportation have produced a generally downward loss-and-damage trend, a leveling-off tendency has also appeared during the last ten. (From A. A. R. Freight Claims Division figures.) By some, this is attributed to increased freight-train speeds. Yet who, on America's railroads, would advocate a return to slow freight? The answer, then, may well be that a smoother, high-speed freight-car ride is needed to produce a profitable drop in this somewhat static loss-and-damage graph. The A. S. F. Ride-Control Truck (A-3) gives freight cars that kind of ride.

unspaylou xsmil)

AMERICAN STEEL FOUNDRIES

#185--- ... or



Molybdenum steel reciprocating gear cuts both locomotive and track maintenance expenses.



CLIMAX FURNISHES AUTHORITATIVE ENGINEERING DATA ON MOLYBDENUM APPLICATIONS.

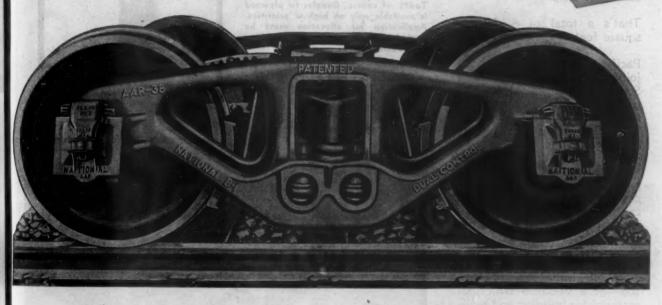


MOLYBDIC OXIDE, BRIQUETTED OR CANNED .
FERROMOLYBDENUM . "CALCIUM MOLYBDATE"

Clima I was no me to heary

## Duilt in Controls make D'lan Easier Riding Truck

National B-1 Trucks with Dual Control are protecting cars and lading throughout the United States and Canada. Built-in controls and safety features allow cars with B-1 Trucks to be speeded up with safety.



#### National B-1 Truck with Dual Control

"Spring bounce" controlled . . . Self squaring

Springs protected . . . Quickest Wheel Change

No Spring Plank . . . No Spring Plates required

Less number of parts . . . Lower Maintenance Cost

#### NATIONAL MALLEABLE AND STEEL CASTINGS CO General Offices: CLEVELAND, OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, III

Consider Representatives: RAILWAY AND POWER ENGINEERING CORPORATION, LTD., Toronto and Montreal

## 10,114 Union Pacific Box lars have ceilings of Douglas Fir Plywood

EVERY UNION PACIFIC BOX CAR BUILT SINCE 1936 HAS THIS ADDED PROTECTION FOR LADINGS

INCE 1936, the Union Pacific railroad has built or purchased 10,114 box cars-and every one of these cars utilizes Douglas fir plywood for the inside ceiling and for the ceiling-side wall connector strip.

That's a total of 4,450,000 square feet of plywood!

Pacific Fruit Express (owned jointly by Union Pacific and Southern Pacific) has also used plywood extensively—a total of 4,119,146 square feet in 11,188 new and rebuilt reefer cars.

Major railroads use Double fir plywood because it speeds car construction and produces a car that is strong, rigid, dustproof, tight-able to stand the toughest service.

Douglas fir plywood has many other uses in the railroad field, too-as a versatile structural material for building and modernizing stations, for freight sheds and warehouses, concrete forms, and for other maintenance and construction

BOUGLAS FIR

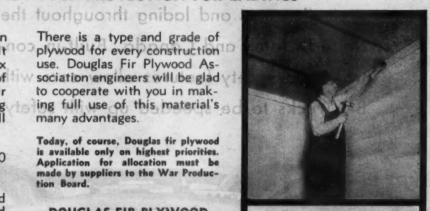
PLYTORM

There is a type and grade of plywood for every construction use. Douglas Fir Plywood Association engineers will be glad to cooperate with you in making full use of this material's many advantages.

Today, of course, Douglas fir plywood is available only on highest priorities. Application for allocation must be made by suppliers to the War Production Board.

#### **DOUGLAS FIR PLYWOOD ASSOCIATION**

Tacoma 2, Washington



Douglas fir plywood was used for both ceilings and connector strips in the Union Pacific cars. Above, Workman is shown applying the connector strip in one of the cars.



The large, light, sturdy plywood panels are easily and quickly applied. The finished job. too. possesses many outstanding advantages.

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

EXT.-D.F.P.A

REMUINE

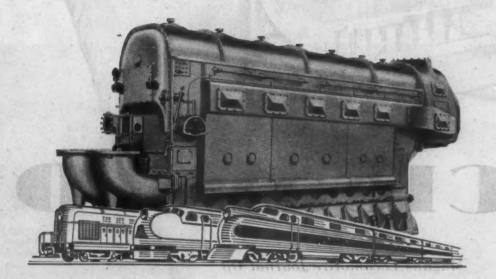
YSCORD SHEATHING

PLYPANEL D.F.P.A.

PLY WALL

ouglas Fir Plywo

## 2000-Horsepower Diesels Mean Less Locomotive Servicing



T takes only three Fairbanks-Morse Opposed-Piston Diesels to power a 6000-horsepower locomotive! Three Diesels and generators are obviously maintained and serviced faster and more economically than four or more.

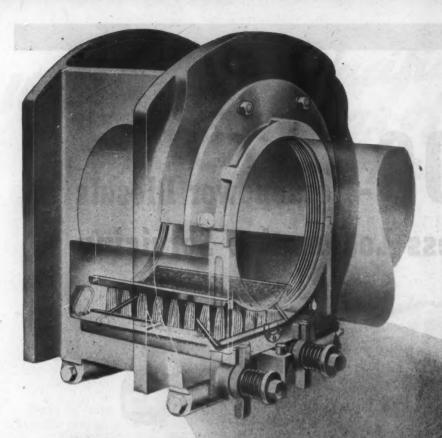
Fairbanks-Morse Opposed-

Piston Diesels are easy to maintain, too, because they are simple ... require few adjustments. They have no valves or valve-actuating mechanisms, no cylinder heads.

Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY MORE WAR BONDS





#### Clean

Magnus Locomotive Journal Oil
Lubricator acts as a filter. Oil climbs
the absorbent wicking by capillary
action, leaving dirt and abrasives in
the bottom of the box. Q The compact
lubricating pad, held snugly against
the journal, assures a constant supply
of clean oil. There are no waste grabs
or lint wipers. Further details will be
furnished on request.

Saring Metar

MODERN HEAVY DUTY BEARINGS

METAL CORPORATION

MAGNUS



Magnus Satco-Lined Lateral Hub Facing for engine-truck, trailer and driving boxes.



## 100% equipped with the NEW Same fittings

It is with justifiable pride that the Weatherhead Company has the privilege of announcing that the sensational new Sterling Viking Diesel Engine is completely equipped with our patented Ermeto Fitting. This remarkable fitting eliminates flaring, welding, soldering or threading and has been designed to withstand excessive vibrations for an indefinite period without losing its original tightness. This new Sterling installation is the latest honor to be given Ermeto, a fitting that has proved its value in

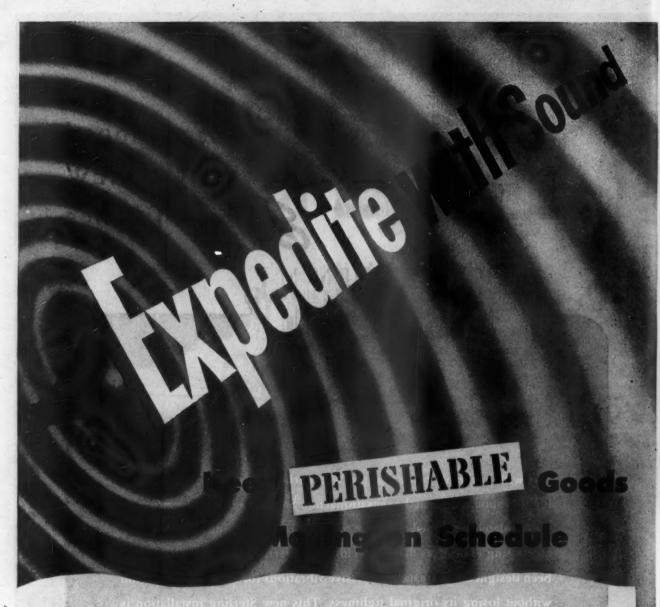
thousands of applications of hydraulic, oil, water, gas and fuel lines.

#### Weatherhead

THE WEATHERHEAD COMPANY, CLEVELAND, OHIO Manufacturers of vital parts for the automative, aviation, refrigeration and other key indistries.

Plants: Cleveland, Columbia City, Ind., Los Angeles Canada—St. Thomas, Ontario





#### Install an RCA Sound System

ANRCA Sound System in your produce yard will eliminate costly delays in handling perishable freight. Instructions for the disposal of perishables can be broadcast over the sound system the instant the shipment arrives. Orders are dispatched over the yard speakers, and traffic progresses into and through the yard as directed — without stopping for instructions.

Proper handling of perishables saves money for the commission merchant and railroad by helping to prevent spoilage. When your yard is equipped with a sound system, cars that should be on the move will not clog the tracks. All yard operations can be coordinated over the scientifically engineered installation.

Use your system to keep in touch with all yard personnel—spot cars—give orders directly to switch crews—announce the arrival of cars to switchmen—page inspectors, truckers, dealers.

RCA Sound Systems are also available for your passenger stations for paging and making announcements. Other RCA Sound Systems for your home office, ticket agents, and operating departments provide inter-communication and the benefits of Industrial Music — help your entire organization function smoothly and efficiently.

Modernize your station, yard and office with RCA Sound.
Call in an RCA representative or write RADIO
CORPORATION OF AMERICA, Sound Equipment
Section, Box 70-86, Camden, N. J. In Canada
RCA Victor Company Limited, Montreal.

RCA SOUND SYSTEMS

70-6251-6

RPORATION

AMERICA

ONDS.



OWI Photo by Palmer in an Allegheny Ludlum plant

#### tainless Steel Carriers FOR WAR'S VITAL LIQUIDS

WHO'S to say what job is more vital than another, when the

#### HAND BOOK OF SPECIAL STEELS

Newly revised and reprinted— a comprehensive book on the properties, uses, and best meth-ods of handling, treatment, etc. of tool, stainless and other alloy steels. Plenty of tables to facili-tate quick reference and selec-tion. 136 pages, pocket-sized, latest data.

SEND FOR YOUR COPY

Address Dept. R.A. 25

chips are down? Those Allegheny Metal tubes aren't gun barrels, but they carry charges quite as potent in the overall picture. Much stainless tubing has gone into the manufacture of high-octane gas, synthetic rubber, magnesium, food and dairy products, etc.—and in more minute sizes, it is indispensable in aircraft fuel and instrument lines, drug and medical work and similar uses. In each case, the job was a func-

tion of stainless steel's ability to withstand corrosion or heat, or impart greater strength and reliability. Where can Allegheny Metal

-either in tubing, bars, wire, sheets, strip, castings or forgings—operate to improve your products? Our Technical Staff is at your service.



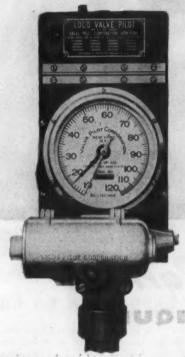
CORPORATION

W&D A-9333

Allegheny Metal also handled by all Joseph T. Ryersen & Sen, Inc. warel

### Then and Now





In 1880, the St. Louis & San Francisco built and named Locomotive 65 for CAPTAIN C. W. ROGERS, the General Manager.

She was a sturdy engine of the period but like her sisters was handicapped because the means correctly to correlate cut-off and speed was lacking.

Today on the "FRISCO" the Valve Pilot leads to the correct use of steam, assures maximum tractive effort when needed, and makes a mile by mile record of which the engineman is justly proud.

Stand 1944 to read his stand of the stand of

VALYE PILOT CORPORATION

230 Park Avenue, New York 17, N. Y.

Uncl Uses Sprin

## tenderiz

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the SHOCK!

## Style A-6-A HOLLAND Volute

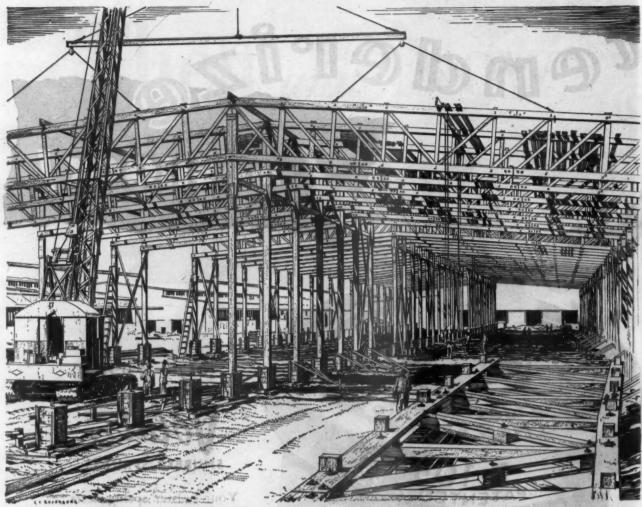
SNUBBER SPRINGS

Your bolster spring nests—continually "strafed" by today's increased loads and war-accelerated speeds—need the shock-tenderizing effect of Holland Volute Suubber Springs.

Uncle Sam Uses Volute Springs on Many Tanks.

HOLLIND

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS



ARMY WAREHOUSES. 2304 flat top roof trusses for 12 buildings (200' x 800') prefabricated and erected by Timber Structures, inc. Fee drawing by Louis C.
Resemberg, internationally known either and renderer. A copy suitable for framing will be mailed free to architects and engineers on professional letterhead request.

#### Good Machinery Deserves Good Housing

#### ... BUILD WITH TIMBER STRUCTURES

The war has spotlighted the importance of warehouses. Thousands of such structures have been built for essential civilian industry and for the armed forces in recent years; thousands more will be needed to serve American postwar railway activities.

The Timber Structures organization specializes on roof truss construction for freight warehouses and utility buildings. Much of our experience in the past ten years has been the fabrication of trusses and other timber items for this type of building; much of our future service to architects, engineers, contractors, management will be in the broad field of industrial

warehouse design and fabrication.

#### Clear Floor Space

The necessity for large areas of clear floor space requires the use of roof trusses long enough and strong enough to support necessary loads with a minimum of posts and columns. Teco ring-connected trusses of wood have proved to be suited to this type of construction, particularly when Timber Structures Engineering in Wood



Portland 8, Oregon New York 17, N.Y.

policy is applied to the particular problem in hand.

has hons equip

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This policy starts with engineering and design, follows through to fabrication, assembly, inspection, shipping and (if desired) erection. All are part of our service. All are responsible for the construction speed, economy, strength, low maintenance and permanence of roof trusses and other heavy timber items supplied by us.

Your current or future building program may be such that you can use our services. Inquiries are welcomed on the use of timber and allied structural materials. Illustrated literature covering warehouse and other industrial construction on request.



#### FIRST VICTORY WAS OVER

Low in alloy content-high in the physical characteristics that make steel great-N-A-X alloy steel has helped to give America tougher, deadlier weapons of war. It has taken its place in fighting equipment of all types—in planes, tanks, landing craft, mobile artillery, sun carriages, combat vehicles and scores of other applications where weight could be reduced and performance improved by the strength impact resistance and long fatigue life of N-A-X alloy steel.

N-A-X alloy steel is produced in high-tensile grades and in carburzing and constructional grades to give industry a great all-purpose steel of virtually constant analysis. Stronger and tougher than mild carbon steel N-A-X alloy steel retains the advantages of excellent response to heat treatment, read Weight

machinability, easy cold forming and weldability. More economical than commercial high-alloy steel, N-A-X alloy steel compares favorably in tensile strength, yield strength, elongation, reduction of area and Izod notched bar values.

Tomorrow's greatest values in manufactured products will be fabricated of N-A-X alloy steel.

#### Corporation

DETROIT 18, MICHIGAN . SALES OFFICES IN PRINCIPAL CITIES Division of NATIONAL STEEL CORPORATION, Executive Offices, Pittsburgh, Pe.

GREAT STEEL FROM GREAT LAKES

#### HIGHLIGHTS OF N-A-X ALLOY STEEL:

by a minimum tendency toward strain-aging or blue brittleness retains fine grain structure even at relatively high temperatures. It's the steel that lends soughness to jeeps, tanks, tank busters and scores of other great weapons.

N-A-X 9100 SERIES steel is produced in both molybdenum-bearing and molybdenum-free types. Series X-9100 type, containing molybdenum, provides extra-deep hardenability.
N-A-X ARMORPLATE, used in tanks,

armored cars and practically

every landing craft built today, is an example of the versatility of Great Lakes low-alloy steel. The exacting requirements of this apexacting requirements of this ap-plication, calling for extreme toughness, hardness and impact resistance, have been met con-sistently by this N-A-X alloy steel.

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#### ON AN ADVANCE BASE ON KWAJALEIN IN THE MARSHALL ISLANDS

THIS Mobile Machine Shop is one of scores working at our most advanced flying fields. Each is a complete repair shop. Equipped with lathes, vises and welders, each shop-on-wheels keeps dozens of planes in the air which might otherwise be total losses.

Most significant is the fact that this vehicle employs Yoloy high-tensile steel in its construction. Yoloy is used by the designer and builder--Couse Laboratories, of Newark, N. J. --because this tough, extra strong, nickel-copper low alloy steel permits unusually light-weight body construction. That means less deadweight and more "pay-load." It means that the vehicles can go over rough roads and wild country where heavier trucks just couldn't make it.

Yoloy's weldability and ductility permit easier, faster fabrication against rush production orders; its greater impact strength--even at lowest temperatures, permits the portable shop to operate in the Arctic as well as in the desert.

Proved and re-proved, over and over again, in the hardest kinds of war service, Yoloy is now available to any manufacturer who wants utmost performance in a low alloy steel. Your inquiry will receive our immediate attention.

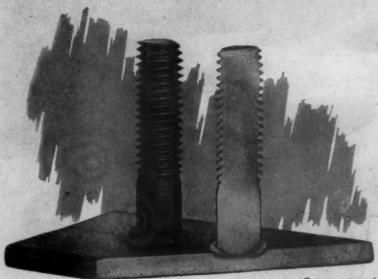
#### YOUNGSTOWN

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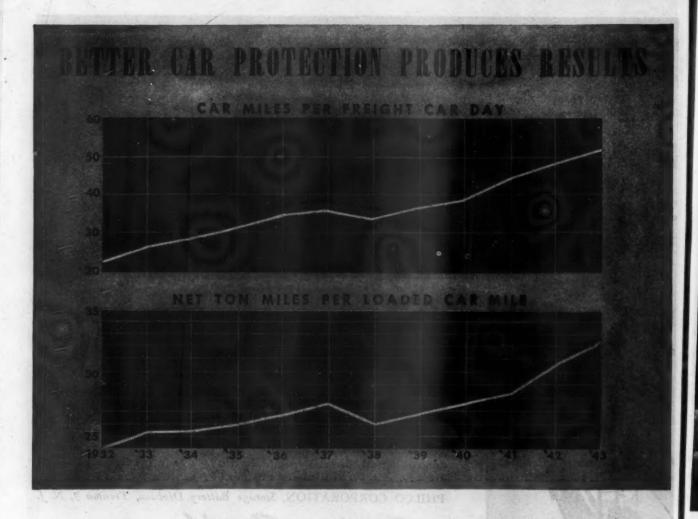
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As shown in the above diagram, both car mileage per freight car day and net ton miles per loaded car mile have been materially increased during the last twelve years, greatly increasing the shocks to which freight cars are subjected in switching and train movements.

THE ANTIME, shortage of help has curtailed the scope of preventive maintenance. Yet the cost of freight car repairs per ton mile has been decreased over 10% since

1932—resulting from improvement in operating practices, freight car standards, and shock absorbing devices.

Over 98% of the cars in freight carrying service are A.A.R. construction, and over 96% have Friction Draft Gears.

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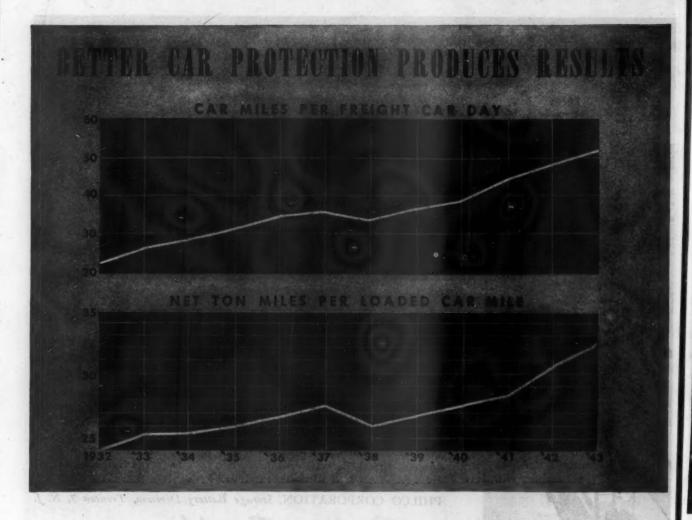
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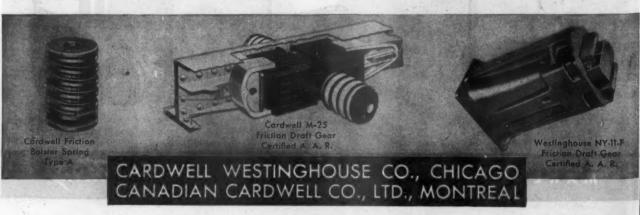
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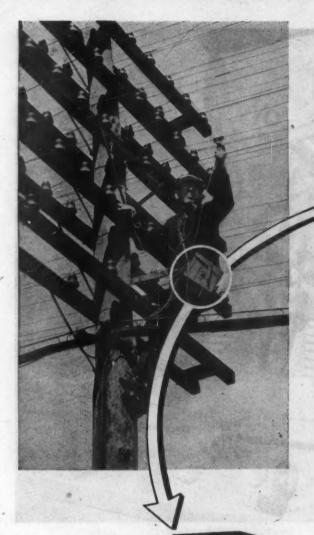
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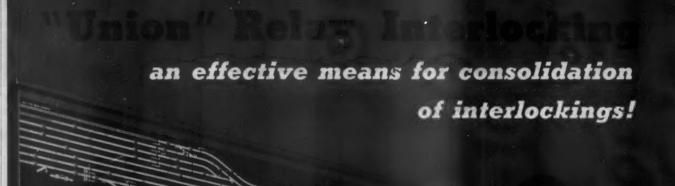
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NEW systems and devices for the control of switches and signals from a remote point have reduced the cost of centralization of interlocking controls.

One railroad, in order to reduce operational delays and expedite train movements, economically consolidated the controls of an extended track and signal layout by installing a "Union" Relay Interlocking System, using the unit-lever machine illustrated above.

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### The Week at a Glance

WHY THE RRS ARE BIDDLED: The cunning and malignant young men of the Justice Department-bent on undermining the above-board co-operative efforts which have made private operation of the railroads such an outstanding success in moving the burden of war traffic-have been much more vocal, and may be more articulate, than their opponents. But, here and there an intelligent and forthright mind has brought an eloquent voice into action against the malice of these mischief-makers. We published in our October 21 issue an analysis by the able Joseph G. Kerr of the machinations of these persecuting attorneys; and the news pages herein convey in brief résumé the adept excoriation of them by Elmer Smith at last week's meeting of the I. C. C. practitioners. Mr. Smith's exposition makes it clear that the purpose of this cabal is nothing short of the complete destruction of the I. C. C. rate regulation and the reinstatement of unbridled competition in a field where its destructiveness was unanimously conceded more than 50 years ago. Further examination of the hiddlery and bergery going on against the railroads appears in an editorial herein.

DIESEL SHOP DESIDERATA: Practices dictated by experience govern the characteristics of the two types of running maintenance shops for Diesel-electric locomotives which H. B. Ellis, service director for Electro-Motive, describes in a feature article, the first part of which appears on page 683. Emphasis is put on attaining a design and arrangement of interior facilities that will facilitate carrying out shop operations with the greatest possible case, speed and efficiency, taking into consideration the fundamental elements distinguishing Diesel design.

THEY ALL GET FED: Lots of railroad men know something about the disturbing effect on domestic routine of food rationing and its accompanying annoyances, but it takes evidence such as was given the Pacific Railway Club by the dining car and restaurant managers of three major western roads (as summarized in the news pages this week) to bring home the full significance of the obstacles this branch of the railroads' forces has had to overcome in meeting the demands of wartime travel. Shortcuts have made it possible to serve 700 meals per day in a 36-seat diner, but shortcuts weren't sufficient to solve the problem presented by the inability of inexperienced cooks to boil eggs to the proper degree of hardness while trains are crossing the western mountains. The answer to that one is-no more boiled eggs.

RIGHT OR PRIVILEGE?: The firemen's David Robertson has announced flatly that railroad brotherhood members will fight to the last gasp for their seniority "rights" against any Selective Service rulings that may conflict with their own views as to the priority accompanying veterans' claims to jobs held by non-veterans. An editorial this week points out that job preference by seniority does not fall into the category of guaranteed inalienable rights at all, but is, on the contrary, a privilege (widely recognized and accepted, to be sure) won and maintained largely by political strength. Nevertheless, the ultimate decision as to the basis upon which job preference will be determined after the war will, in all probability, rest neither with management nor with the unions, for all their political power, but will depend on the exercise of the even greater (and certainly not more objectionable) political influence of those who went to war.

STATISTICAL EQUIVOCATION: The Retirement Board continues to issue statistics on railroad employees' average earnings-which have the inevitable effect (and, possibly, the purpose) of fooling the public as to the actual earnings of these employees. These statistically-disreputable compilations for 1942 are surveyed in the news pages herein. The Retirement Board achieves its misleading results by dividing total compensation for a year by the total number of people who worked for any time at all during the year, calling the result the "average compensation." By this casuistic device, \$1,348 is shown as average 1942 compensation of railroad employees-or 42 per cent less than the average the I. C. C. reached by respectable statistical methods.

SURVIVAL A LA NEW DEAL: Oldfashioned railroad executives-who generally have been of the opinion that good business practice frowns on spending what you don't have-were read a lesson in the "new' economics a few days ago by one of the brilliant young men on the O.P.A. staff, who "held the line" against rate increases at the Ex Parte 148 hearing (even though that same line was allowed to buckle long since when things the railways buy were involved). This authority explained that the industry doesn't need earnings (to say nothing of profits) to maintain its spending power. It can live on its fat, and when that is exhausted it can borrow-or go through the wringer. A perfectly logical application to the railroads, in other words, of the philosophy of the unbalanced budget and, as John Dickinson pointed out, of "reform through chaos"-the inevitable result being dependence on government subsidy.

I. T. C. ANALYZED: Requirements that must be met by a practicable system of train communication are set forth in an article on page 687, the basis of which is a recent address by Dr. L. O. Grondahl. The characteristics of the inductive system selected by the Pennsylvania for installation on its Harrisburg-Pittsburgh main line are described in considerable detail, and its performance in the light of the enumerated basic requirements is explained. The apparatus has a range of about 10 miles between vehicles and of 50 to 100 miles between vehicles and fixed wayside stations.

A STARTLING BOOK: The leading editorial in this issue deals-as did our opening article last week-with the theme that regardless of the election's outcome, political developments now taking place in this country bear an alarming similarity to those which occurred more than a generation ago in Germany, and which led ineluctably to the gory horror called nazism. Incontrovertible evidence to this effect is given in a book called "The Road to Serfdom," by F. A. Hayek-who was a highly competent eye-witness to the innocentappearing preparations in Germany before the last war which have now encompassed the ruin of that unhappy people. Americans can become nazified too-and will, unless they check up short on their current socialistic excursions. Hayek's testimony will convince and thoroughly arouse anyone with a reasonable endowment of intelligence and gumption; and its message is especially appropriate for business men-who are America's most effective (and hence most dangerous) socialists.

THE GYPSY'S RETURN: One of the editorials in this issue develops the conclusion that railroads that had more or less reconciled themselves to the loss of a substantial part of their livestock traffic to the gypsy truckers, only to have these gentry suddenly disappear from the field, to a large extent, as soon as they were faced with wartime difficulties—and opportunities elsewhere—are likely to find the livestock shippers to whose aid the railroads had to come when that happened again favoring truck transportation as soon as the gypsy operators see fit to get back on the road.

A WORD FROM OREGON: In the opinion of a correspondent whose letter appears in this issue, the railroads are bucking the trend when, as he puts it, they undertake to match big engines, long trains, and infrequent service against small-unit, highly flexible highway competition. Even though this writer's economic premises may be more than a little over-simplified, his expressed objectives will elicit some sympathy, and his views may be one straw showing the direction of the wind of employee, and public, thinking.

COMPETITION PRESERVED: It is not in the "public interest," according to two commissioners who form a majority of Division 4, for a railroad-owned truck line to engage in the long-haul trucking business-even though its purpose is to relieve the railroad of uneconomical operations, to give shippers at least as good service as independent truckers have provided, and, if possible, to make some money at the same time. The decision, arising from a proposal of the Santa Fe to buy out two truckers whose routes parallel its main line, is reported in this week's news pages. A substantial bulwark for the finding was the National Transportation Policy clause concerning the preservation of each agency of transportation.

# Casy to Hand T IS not accidental that running repairs on all types of General Motors locomotives are made between trips and

that when major overhaul finally becomes necessary it is accomplished in far less time than with other types.

Deliberate, intensive design for ease of service is a heritage of rail car manufacture carried by the Electro-Motive organization into the Diesel era. Every part has been sweated down as to weight, accessibility and precision fit with an eye not only to the finest performance but also to the quickest, most accurate replacement on repair when wear or breakage makes service necessary.

This is another dividend which users of Electro-Motive equipment collect on "under-one-roof" design and manufacture of all components.

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### RAILWAY AGE

### Why the Trend Toward Socialism?

Whatever the result of next week's election, the nation will be confronted longer than anybody can see into the future with the issue of liberalism versus socialism—i.e., political and economic freedom of the individual versus complete domination of him by government. A British statesman said a third of a century ago, "We are all socialists now." This statement would be much nearer the truth if made about the British and American people today. Both are traveling the road to socialism, of which Communism, Naziism and Fascism are but different forms under different names. And, because of their political and economic ignorance, most Britishers and Americans don't know this, although it is much the most vitally important trend in our time.

The trend is due in only small part to propaganda expressly advocating socialism. It is due almost entirely to propaganda attacking capitalism, and to the promotion of socialistic policies by business men, labor leaders and politicians, most of whom profess devotion to free private enterprise. Most Republicans will be shocked by the demonstrably true statement that in most countries the trend toward socialism begins with the adoption of protective tariffs. Such tariffs do not "protect" our railroads, which are subject to little foreign competition, but do increase the prices and wages our railroads must pay to the level of those paid by our protected industries. As our railroads, although thus handicapped by protectionism, charge lower rates than most of the world's railroads, why cannot our other industries get along without protection and meet foreign competition in our own and foreign markets with as low or lower prices as most of the world's industries?

An important reason why the trend toward socialism usually begins with protective tariffs is that such tariffs aid and encourage monopolies and monopoly practices which could not develop if many of our industries were not protected from foreign competition in the domestic market. As is said in his book, "The Road to Serfdom", by Friedrich A. Hayek, a former Austrian economist who since 1931 has been professor of economic science at the University of London:

"The impetus of the movement toward totalitarianism comes mainly from the two great vested interests, organized capital and organized labor.... They ... support the monopolistic organization of industry; and it is this tendency which is the great immediate danger.... They are as shortsighted as were their German neighbors in believing they will be allowed not only to create but also for any length of time to run such a system.... It will not be long until they will find, as their German colleagues did, that they are no longer masters, but will in every respect have to be satisfied with whatever power and emoluments the government will concede them."

By far the most powerful monopolies that ever existed in this country are its present labor monopolies. President Roosevelt said in his speech in Chicago last week that after the war wages will be fixed by collective bargaining uninterfered with by government. But if he is re-elected will his administration continue trying both to destroy alleged business monopolies and to strengthen labor monopolies? If so, we will have, owing to government interference, high wages dictated by labor monopolies, and either high prices based on these high wages or prices made so low by business competition that the high monopoly wages will make adequate business profits impossible. The President said he favors private enterprise; but private enterprise cannot live, much less prosper, expand and provide enough employment, under a regime of high wages fixed by labor monopolies and low prices determined by business competition.

Every expenditure by which government creates property used for a commercial purpose stimulates the trend toward socialism. This is



especially true if the products, services or use of property created by government investment—housing, power plants, highways, waterways, airports, and so on—are sold, as they usually are, for less than their total cost, including interest and as much taxes as the government-owned property would have to pay if it were privately-owned.

Government-owned property devoted to commercial purposes, like other government-owned property, yields little or no taxes; and, because of the huge increase of taxes, the tax discrimination against privately-owned property that has to compete with government-owned property has become perfectly enormous. The railways have to compete with waterways, highways and airports the government investment in which is not taxed. But the railways' taxes of \$1,640 million (exclusive of payroll taxes) in 1943, were 6.3 per cent on their total investment, took 18 per cent of their gross earnings, and 48 per cent of their net earnings before taxes, and were 20½ per cent larger than their net operating income after taxes.

However much taxes may be reduced, privatelyowned property will have to yield much more taxes in the post-war period than in the pre-war period —including taxes to provide the money for every investment made to create government-owned property that will compete with privately-owned property. Yet Mr. Roosevelt, while saying he favors private enterprise, advocated huge government expenditures on more tax-free or virtually tax-free T. V. A.'s, superhighways, waterways, housing and other such projects. And he is joined in the promotion of many such projects by business interests, although their tendency to undermine private enterprise and push the nation toward socialism is plain to every advocate of socialism and is disregarded only by ostensible advocates of private enterprise.

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Protective tariffs; business and labor monopolies; competition of tax-free government-owned property with heavily taxed privately-owned property; excessive and punitive taxation of large private incomes; government subsidization of some private industries that compete with unsubsidized private industries-these are some of the causes of the rapid trend in this country toward Communism, Naziism, Fascism or some other form of socialism that will have to be destroyed if that trend is to be arrested. But to destroy the causes of the trend will be impossible as long as "we are all socialists" in the sense that virtually all of us are determined, regardless of our professed political and economic beliefs, to practice or promote every socialistic policy that we believe will serve our

own immediate selfish interests.

### Seniority vs. Jobs for Returning Service Men

Trouble is probably in store for any industry, labor union or other organization having control over employment which, in the years just ahead, does not satisfy discharged members of the armed services of its fairness in giving them at least an even chance at jobs with those who did not go to war. Experience with this situation following the last war does not afford a reliable gage, because, this time, there are twice as many men under arms; and most of them will have been in service long enough before they are discharged to identify themselves primarily as military men, eager to make common cause with their colleagues.

There are few people anywhere—and none, certainly, in positions of leadership in the railroad industry—who wish to be less than fair to returning service men. There are, however, the seniority agreements between railway unions and managements to consider.

These agreements aim to protect the seniority of a railroad man entering military service: That is, so long as he worked on a railroad just prior to entering the armed services, he can return to his railroad with the same date on his seniority as if his railroad service had been uninterrupted. Selective Service authorities, however, have taken the position that a discharged military man, with prior railroad service, must be given job preference over a civilian without military service, regardless of the latter's prior seniority. As

to this contention, many railway officers will probably be rather sympathetic with the view of President D. B. Robertson of the Brotherhood of Locomotive Firemen & Enginemen, who insists that seniority rights, as of actual entry into railroad service, be observed in determining an employee's claim to a particular job. Neither Selective Service rulings nor union agreements make any provision for the service man who would have become a railroader except for the war, but who now finds the job he might have had firmly held by a civilian—perhaps with qualifications inferior to his own. The young man who entered the armed services directly from school is likely to find himself in an unenviable position, under present seniority practices.

The fact of the matter is that seniority is a purely conventional "right"—or, rather, a privilege—established by the so-called "economic power" (which would be more accurately described as "political power") of the unions. Seniority preference is not recognized as a "right" (although frequently observed in practice) in non-unionized occupations. The Constitution does not give anybody such a "right" and neither does the Decalogue. A more factual characterization of precedence so established would be "a privilege enforced by political action or threat thereof."

It is true, as Mr. Robertson has said, that this privilege (or "right," if that term be preferred) has long been recognized in most occupations on the railroads which are dominated by the unions. It is doubtless true also that, for such occupations, many railroad managements would prefer to continue the seniority rule, with its disadvantages, rather than face the con-

tention which would follow any attempt to modify the practice.

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It would not be realistic, however, to assume that a privilege relying as this one does solely on the political strength of organized labor, could not be withdrawn or greatly modified, if a determined political power stronger than organized labor should so decree. It is not here suggested either that the seniority rule be abrogated or modified to accord "super-seniority" to the veterans, or, on the contrary, that such a proposal be resisted.

The more realistic view would appear to be, rather, to avoid partisanship for or against such a proposal until the veterans themselves have been heard from, because it is they, in all probability, rather than railway managements or unions who will decide it.

As long as job preference is not to be decided by relative individual merit, but is to be determined politically, certainly no one can reasonably object to political power in this area being exercised as well in behalf of those who went to war as for the benefit of those who did not.

### **Biddle Does His Bit**

When the war began the western railways were going along as best they could, plagued by numerous operating restrictions imposed by various states and by the brotherhoods. Many states insisted upon maintaining train limit laws on the statute books that served

no purpose whatever except to hamper railway operations and to create more and completely unnecessary jobs. Meanwhile, certain operating limitations imposed upon the railways forty years ago by the brother-hoods were still in force, also completely out of step with modern railway practice and perpetuated only to create more featherbed jobs.

Then came the Pearl Harbor attack and, with it, because of vital military needs, a complete reversal of the trend of loaded traffic on western railways from eastbound to westbound. The transportation arteries to the Pacific Coast suddenly became vital lifelines. Very soon, the Interstate Commerce Commission decided that the train limit laws were unjustified, and

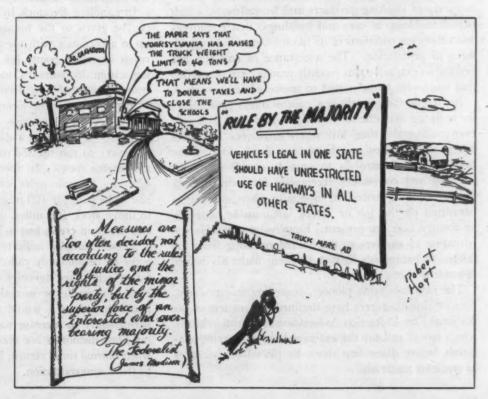
ordered their discontinuance. The employees of the western railways hung on to their featherbed rules somewhat longer—in fact, there are still some in effect—but eventually they, too, permitted sound, efficient railway operation to replace hampering and unnecessary restrictions. To their credit, also, was the fact that, as traffic increased and manpower shortages in the West became acute, they worked extraordinarily long hours. Moreover, the "old heads" co-operated to the fullest extent in training new employees, so that the vital Pacific freight might go through, undelayed.

What actually happened was that, in a territory where the struggle between the railways on the one hand and self-seeking politicians and labor on the other had been particularly acute, a virtual armistice was declared for the duration, in the interests of getting vitally needed war freight to the Pacific. Patriotism was placed above profiteering by all the parties concerned, and our present successes in the Pacific are due, in no small measure, to this armistice and the co-operative teamwork which followed.

Now, as the European war nears its close, the western railways are being called upon for an even more gigantic effort. Brigadier General Andrew McIntyre has told them that, very shortly, the western railways will be called upon to handle *double* the traffic they have handled heretofore. The general knows what he is talking about; he is a former superintendent of freight transportation of the Pennsylvania and one of the country's outstanding transportation experts.

It is a large order that the general has given the

### If You Believe All You Read About Transportation—4



western railways. They should be busy in figuring out how it may be accomplished. The burying of the hatchet by the local politicians and the labor leaders has helped much in enabling the western railways to accomplish the impossible. At this crucial moment the Hon. Biddle, of the Philadelphia Drexel-Biddles, decided to bury the hatchet too. He buried it in the skull of the western railways, selecting the very moment, with uncanny accuracy, when such an action would do the most possible harm to the nation's war effort. This, of course, was accidental, as the timing was based on the national election rather than on the war effort. Even so, Mr. Biddle is "doing his bit" at the very worst possible time, as far as the country's primary interest in early victory is concerned!

### Control vs. Prohibition

Because the present general attitude toward smoking encourages rather than discourages the practice during working hours, those attending the Western region meeting of the Fire Protection and Insurance section of the Association of American Railroads at Chicago recently were of the opinion that more can be accomplished in preventing fires due to that cause if railroads will practice control among employees rather than prohibition.

First, prohibition has failed to stop smoking by employees while at work or by other persons on railroad property, and has not arrested fires due to smoking or matches. In 1943 fires caused by smoking or matches totalled 346 with a loss of \$862,757, while in 1944 the number had increased to 418 and the loss to \$1.563.619.

Second, smoking has been so encouraged by manufacturers of smoking products and by railroads, which permit smoking in cars and buildings, that employees and others are oblivious of its hazardousness and ignore signs of prohibition. The acceptance of smoking has become so extensive that recently unions have demanded that employees be permitted to smoke while at work.

In view of these conditions, control offers possibilities for reducing fires due to smoking and matches, and may even reduce the time lost when employees leave the job to smoke, often in a hazardous place. One of the first steps in control is to provide a safe place for smoking and convenient receptacles for extinguishing lighted smoking materials, especially when smoking is permitted on the job or where inflammable materials or construction are present. Equally important is the education of smokers to the hazard resulting from the failure to extinguish lighted smoking materials before discarding them.

The railroads must pioneer, regarding this problem, because manufacturers have declined the request of the National Fire Protection Association that caution labels, which would call for the extinguishing of burning materials before discarding them, be placed on packages of smoking materials.

### **Red Points for the Nation**

Since the war the railways have been performing a great public service for the nation in taking over the transportation of various commodities as their competitors have proved unequal to the task. One of their greatest and least publicized contributions has been in the handling of livestock, and particularly of feeder livestock, from areas of sparse feed to areas of plenty for fattening for the market. The railways formerly enjoyed a virtual monopoly in the transportation of all sorts of livestock, but, following the development of truck transportation, livestock proved itself so adaptable to such means of transportation that, in a relatively few years, from handling virtually all of the country's livestock, the railways found themselves handling less than 50 per cent of it.

Truck transportation produced injuries to livestock which would have greatly perturbed the Society for the Prevention of Cruelty to Animals if it had been as assiduous in following up transportation by truck as transportation by rail. The hauling of livestock became largely the prerogative of the gypsy trucker, whose lack of transportation cost statistics caused much chaos in the market prices of livestock. The war has changed all this. The gypsy trucker has been drafted or exchanged his precarious prospects for a war job. Shortage of tires and trucks made itself felt, and, as greater and greater meat shortages developed, it became incumbent upon the railways to handle livestock in much greater quantities than for many years. They have responded, as they have responded to all the demands put upon them when competitive means of transportation have proved themselves unsuited to the transportation needs of a nation at war.

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In handling livestock by rail, no great consideration can be given to the tonnage factor, trains being built up in accordance with the necessity of having livestock reach favorable points for feeding, watering and resting within 36 hours. Consequently, the average stock train consists of only from 40 to 70 per cent of the tonnage rating of the locomotive, making the handling of livestock an expensive operation. In one instance to move feeder stock a distance of 232 miles, it was necessary to run up 352 miles in the payment of train and engine crews. In another instance, to move stock 42 miles 84 train-miles were operated and the crews had to be paid for 100 miles. In still another instance, to move stock 505 miles, 954 train-miles were run up and the train crews had to be paid for 1,077 miles.

These examples indicate what it means to the railways to be suddenly called upon to handle shipments for which other agencies of transportation have become unsuitable or unavailable. It would seem that livestock shippers would be grateful and endeavor permanently to increase the movement of livestock by rail; but memories are short. It is to be feared that, when normal times return, livestock shippers will return to truck transportation.

# What Features in Diesel Shops?

Experience indicates that while many elements are optional, certain others are fundamental to efficient maintenance and repairs, and maximum availability

By H. B. Ellis,

Director of Service and Parts, Electro-Motive Division, General Motors Corporation, LaGrange, Ill.

### PART I

ITH Diesel-electric power finding an important place in the present and post-war locomotive programs of the railways, for switching, passenger and freight service and representing a huge investment to gain certain specific ends, no reasonable effort should be spared to maintain this power to a high degree of efficiency and serviceability. As with any type of high-grade machinery under intensive use, no matter how well designed and built, Diesel power requires proper inspection, proper maintenance and periodic repairs in the interest of maximum efficiency and availability, and maximum service life—in other words, in the interest of securing maximum return upon the investment in it.

Recognizing these facts, the Electro-Motive Division of General Motors Corporation is giving a considerable amount of aid to the railways in enabling them to visualize the maintenance requirements of this type of power, and in assisting them to set up the most effective organizations, procedures and facilities to meet these re-

quirements.

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### **Experience Dictates Desirable Practices**

The key to the maximum effectiveness and life of any piece of machinery is intelligent operation, intelligent maintenance and intelligent repair, particularly in the case of Diesel-electric locomotives as to the use of genuine and not makeshift parts. This must be supplemented by proper organization and adequate maintenance facilities.

The neglect or inadequacy of any one of these factors produce unsatisfactory results, if not failures. The Electro-Motive Division based its services on experience not only with Diesel-electric locomotives but upon the previous experience acquired by the parent General Mo-

tors Corporation with rail motor cars.

It also set up a service organization in the field to aid the railways in every problem of operation, maintenance and repair, and, since October 15, 1934, has operated a school for railway Diesel maintenance and supervision. This school, since April 15, 1938, has been located at its plant in LaGrange, Ill. To carry this educational scheme direct to the railways, the LaGrange school is supplemented by Diesel Instruction Car No. 100, which went into service first on the Chicago, Burlington & Quincy on February 20, 1937, and which supplies facilities where selected railway men can learn the fundamentals of Diesel design, operation, maintenance and repair, looking to their becoming expert instructors on their respective roads. In addition, it has developed inspection, maintenance and repair charts, on a slide-rule

basis, which show the mechanical forces on the railways, automatically, every attention that should be given each specific unit of Diesel-electric locomotive equipment at

any point in its service life.

Of equal importance, the Electro-Motive Division has developed for the railways basic plans for shop facilities in which to maintain and repair their Diesel power, in the interest of adequate care of their locomotives in minimum shopping time, with maximum efficiency in every detail of the work, and thus, maximum availability of each unit for road service and maximum efficiency in every mile of that service. Going beyond the plan stage, it has produced a model of a Diesel running maintenance shop, incorporating to scale all of the features which it considers basic in the interest of adequate and efficient maintenance.

In its basic plans for Diesel maintenance and repair shops—plans which are already forming the basis of a considerable number of such shops now being designed or built by the railways of the country—the Division has no interest in any special design, shape, age or type of construction employed in the shop building itself, beyond, of course, its adequacy from the standpoints of area, cleanliness, lighting, ventilation and other similar details. It is not a question of entirely new facilities or of any specific type of construction, especially where adequate existing shop facilities are available, but rather one of the design and arrangement of facilities, largely within the interior, based upon the inherent characteristics of Diesel design, to permit maximum ease, speed and efficiency in carrying out shop operations.

### Running Maintenance Shop

The basic plans are not designed to indicate what a road should build at any specific point, as this must be based upon many considerations, including the operating characteristics of the road or territory involved, the number of Diesel units in service or contemplated, and the policy of the road as to the extent to which it desires to carry out major repair or rebuilding operations. They do, however, set forth certain basic features which the experience of the builders and of many roads has demonstrated as essential to every Diesel shop if maximum efficiency of shop operations is to be obtained, and give consideration to the basic principle of Diesel locomotive maintenance—that Diesel power, except under special operating conditions, should be maintained on a progressive, or preventive, basis, rather than on a "periodic" basis of heavy overhaul.

The plans reproduced in this article cover two general types of Diesel shops—one exclusively for carrying out



routine running maintenance, and the other, a combination shop for both running maintenance and heavy re-

It is in the interest of efficiency and economy, wherever possible, to locate the heavy repair facilities immediately adjacent to the running maintenance facilities. These designs can be adapted readily to the maintenance and repair of freight power as well as passenger power, including switching units, regardless of its type or builder.

The basic design of running maintenance shop, as shown in the accompanying photographs and the plan and cross-section drawings, Fig. 1 and 2, calls for a transverse type shop, housed in a building generally rectangular in shape, the size of which, however, will depend upon the number of running maintenance tracks required. The "model" plan presented illustrates minimum requirements for the maintenance of four 2,000 hp. units and one switcher at one time. As such, it provides for a general shop area with two locomotive running maintenance tracks, a combined wheel and motor, or truck, release and repair track; auxiliary shop areas for the cleaning and reconditioning of parts; and a storeroom. Based upon the length of present-day twounit Diesel-electric passenger locomotives, the length of the main shop area would be set at 175 ft., as shown in Fig. 1, and the size of the auxiliary shop areas would be in keeping with the amount of work normally required in a two-track shop. The idea is, of course, that the latter areas must be increased in size proportionately as the number of running maintenance tracks and the volume of work in the main shop area are increased.

### Fundamentals of the Shop

Fundamentals shown in the main shop area include a full-length inspection pit for each running maintenance track, a depressed floor level between tracks, and a continuous elevated platform overhead, at locomotive floor level, spread between adjacent running maintenance tracks and along the outer sides of the outside tracks

to permit servicing both sides of locomotives. The inspection pits, which are to be well lighted and drained, have a positive depth of four feet below top of rail, and are four feet in width to allow for the removal of traction motor gear cases, based upon experience that these dimensions permit the greatest convenience in carrying out underside inspection and repair work—without being cramped by a shallower depth, or burdened by the frequent movement of boxes, ladders and staging that would be required in the case of deeper pits. The elevated portion of the pit walls should be held to a maximum of 15 in. in thickness to permit ready accessibility to journal boxes and brake rigging.

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### Depressed Floor Ideal for Inspection

The depressed floor between and alongside all running maintenance tracks, as shown, is 30 in. below top of rail. This is considered ideal from the standpoint of shopmen inspecting or working on locomotive trucks or brake riggings, and also gives consideration to adequate overhead clearance beneath the elevated working platforms. The elevated platforms included in these plans are considered one of the most essential features of the design, the purpose being consistent with efficient operations, less effort and strain on shopmen, and less likely damage to parts handled, by keeping all operations possible directly at the locomotive floor level.

The continuous, full-width platforms recommended preclude constant ladder climbing and provide for one-floor-level movement of all parts between the engine rooms and the auxiliary shop areas, and vice versa. The Electro-Motive plans do not call for any specific type of platform construction—that is, whether of wood, steel, or concrete—but they do call for a type of construction which allows 6-ft. 2-in. headroom from the depressed floor level beneath. They show a type of platform construction which has proved highly satisfactory, which involves wood stringers and decking on steel channels, supported on two rows of columns cut from old 6-in. boiler flues. More specifically, 2-in. box-car flooring, or

equal, is shown for decking, with 2-in. by 6-in. wood stringers spaced 2 ft. 6 in. apart, supported on 7-in. by 2-in. by ½-in. steel channels, the latter being welded to the flue columns. In addition, they show the flue columns spaced 10 ft. apart in the rows, with the rows in each case set back a minimum of 5 ft. from the near rail, features which, with the small diameter columns, cause minimum interference with the movements and operations of shopmen working alongside locomotives on the lower level. Whatever the type decking employed in the platforms, the prime essentials should be that it is not allowed to become slippery, and that it can be kept clean readily by periodic washing with hot water or steam.

The traction motor and wheel release and repair track of the shop, like the road locomotive running maintenance tracks, has a depressed floor on both sides and is equipped with a concrete inspection and working pit 4 ft. deep. It is also served by elevated platforms along both sides. This track, as designed, provides for the inspection of one switch engine at a time, as well as for wheel work, without tieing up the drop pits. The pit in this track need have a length of only approximately 50 ft. Likewise, the track itself can be far shorter than the road locomotive running maintenance tracks, a feature which permits space at its inner end for a storeroom area, as shown in Fig. 1 and 2.

### Hoisting Equipment

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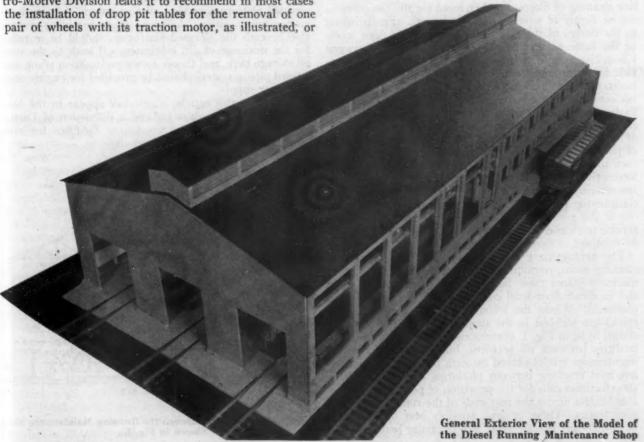
At least two locomotive running maintenance tracks in any maintenance shop should be served by facilities for removing traction motors and wheels or trucks, and while it is recognized that this operation can be effected by various means, including an overhead crane, locomotive hoists and power jacks, the experience of the Electro-Motive Division leads it to recommend in most cases the installation of drop pit tables for the removal of one pair of wheels with its traction motor, as illustrated or

larger tables for the removal of complete trucks. The arrangement shown in Fig. 1 includes a drop table in each locomotive running maintenance track, with its top level with the depressed floor, and so designed that the table top in the track more distant from the wheel release track with its load, can be passed beneath the other table top while it is in normal position in the track.

### Wheel Removal

With this design and arrangement of the drop pit facilities, wheels, complete with their traction motors, can be removed from any type of Diesel locomotive regardless of its length, the number of units involved, or the manner in which the units are coupled. Furthermore, each table can be operated entirely independent of the other, and there is no obstruction to workmen in passing over the drop table tops when they are in position. At the same time, the drop-table arrangement recommended precludes the heavy runway construction and added headroom which would be called for by an overhead crane of the proper capacity, requires minimum use of effective floor area, and avoids some of the hazards involved in other methods of removing wheels and traction motors, or complete trucks.

Longitudinally over the wheel release and repair track, a five-ton traveling crane is recommended to handle traction motors and wheels, and this crane should be so installed as to extend into and serve one end of the storeroom, as shown. Electro-Motive Diesel locomotives do not require crane service for any of the work normally carried out in running maintenance shops, since all parts renewed or replaced can normally be carried in and out of the cab side doors. However, for those types or makes of locomotives where the removal



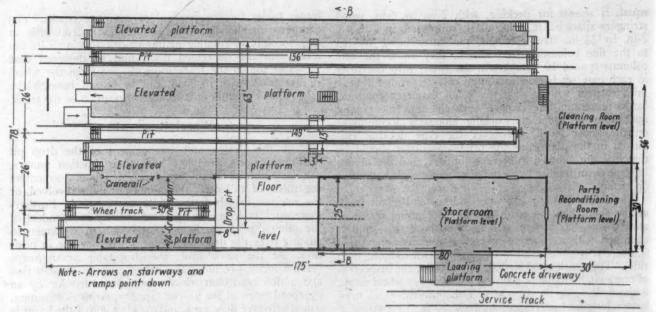


Fig. I.—Basic Plan for a Running Maintenance Shop, Incorporating Features Recommended by Electro-Motive.

of cylinder heads, cylinder liners, etc., is necessarily out through the cab roof, super-height platforms and light jib cranes can be provided to facilitate this work.

### **Auxiliary Shop Areas**

Except for certain fundamental features, the requirements of the auxiliary shop areas in running maintenance shops are relatively simple. These areas should include a room for the cleaning of all parts removed from locomotives, including special facilities for the rapid and effective cleaning of filters; another room for the reconditioning or repair of parts; and a storeroom. Fundamental to the design of these facilities is that their floor levels be the same as that of the elevated platforms between locomotive running maintenance tracks in order to provide for continuous, one-level walking and trucking between them and locomotive units. While it is necessary to use concrete floor construction in the cleaning room, the parts reconditioning room and storeroom floor construction is optional. Fundamental, too, is the arrangement of these facilities to provide for the continuous movement of parts through these areas, first to the cleaning room, then to the repair room, and thence either back to the locomotives from which they came, or into stock in the storeroom. Such an arrangement is shown in the accompanying plan. Still another fundamental in the layout is the provision for access to the storeroom via a service track and a driveway, to permit the ready receipt or shipment of parts and supplies.

The arrangement suggested for the parts and filter cleaning room, reconditioning room and storeroom automatically places these facilities at the rear of the shop and in direct floor-level contact with all of the elevated platforms. Where the locomotive running maintenance tracks are stubbed in the shop, as one of the tracks is shown to be in Fig. 1, continuous trucking between these facilities presents no problem, but where the running maintenance tracks extend through the shop, continuous one-level trucking between platforms and the auxiliary shop facilities calls for the provision of portable or moveable bridges across the rear ends of the running maintenance tracks. These bridges, possibly best of the single or double-leaf bascule type, will normally be in position

to permit trucking operations, and raised only as required to permit the movement of locomotives out of the shop.

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Basement areas beneath the auxiliary shop area, with floors depressed to provide the headroom desired, are available for the storage of heavy parts, for toilets and locker rooms, and for a central lubricating oil plant, embodying storage tanks for new, used and reclaimed oil; also pumps and oil reclamation facilities. These latter facilities are essential to any adequate maintenance shop, with delivery lines located directly beneath each of the elevated platforms, serving oil connections at every locomotive unit position. A second separate piping system, also beneath the elevated platforms, should be installed for the drainage of old lubricating oil back to the used oil storage tank, and thence to the reclamation plant, and a third piping system should be provided for engine cooling water supply.

Part II of this article, which will appear in the next issue, will present plans for and a discussion of Dieselelectric locomotive shops combining facilities for running maintenance and heavy repairs.

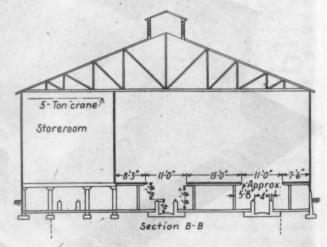


Fig. II—Section B-B Through the Running Maintenance Shop Shown in Fig. I.

# **Inductive Train Communication**

# Development traced and equipment for Middle and Pittsburgh divisions of Pennsylvania described

POLLOWING the address on train communication on the Pennsylvania Railroad by W. R. Triem, general superintendent of telegraph of that system, at the October meeting of the New York Railroad Club, Dr. L. O. Grondahl, director of research and engineering of the Union Switch & Signal Company, traced in considerable detail the development of the Union inductive train communication system and described the equipment to be used on the Middle and Pittsburgh divisions of the P. R. R. Extracts from Doctor Grondahl's address follow:

The Union Switch & Signal Company has been engaged in the study of the problem of train communication for more than 20 years. It began with the idea that as freight trains became longer and signaling between ends of trains became more and more difficult it would be profitable to have a communication system that would enable the crew members to transmit intelligence from one end of the train to the other, independently of the length of the train and

of weather and other conditions.

The idea of train communication for operating purposes has now developed to a point where the term means not only end-to-end communication, but vehicle to vehicle in the same or in different trains, and vehicle to station whenever necessary. In other words train communication has come to mean telephonic communication available between

mobile and fixed stations whenever necessary.

Such a system of communication is necessarily electrical and the one system that immediately presents itself to mind is radio. The Union Company did not consider radio the most practical solution of the problem and began to study the possibility of using the various conductors that are necessarily present along the right-of-way. The track is the one conductor that is always present and for that reason the first attempts were in the direction of using the track as the sole conductor for our communication system. The use of voice current on the rails was found to be impractical for two reasons: (1) The noise level was exceedingly high, and (2) the interference with adjacent telephone lines, which also used voice frequencies, became intolerable.

The Problem of Frequencies—It was then decided to try voice modulation on a very low frequency carrier current. A study of the transmission characteristics of the rails indicated that a carrier frequency of 7000 cycles was in a region of optimum conditions for transmission and this was used. Satisfactory communication was established between ends of a train and between trains and stations and between trains that were not more than 5 miles apart. About 15 yard installations and 2 main line installations of this equipment have been made, in all of which satisfactory communication has been maintained. In some regions the noise level was high and it was necessary to add wayside wires or to increase bonding of rails.

There were several conditions which encouraged us to

study the use of higher frequencies.

(a) It was found that the decrease in noise level with increase in frequency was great enough to be of some

(b) It was found that it would be convenient to use more channels than could be made available in the narrow band below 10,000 cycles.

(c) The announcement of the F. C. C. low power rule made it possible to use higher frequencies without frequency allocations.

(d) It was found that the method of transmission that had already been established was useful and practical at

the higher frequencies.

The Union Switch & Signal Company is at the present time offering an inductive train communication system using carrier frequencies chosen in the region between 5,000 and 250,000 cycles, and applying frequency modulation except with carriers below 10,000 cycles.

### Train Communication System Requirements

The requirements for a train communication system, both from the standpoint of the railroad's communication needs and from the standpoint of the type of apparatus that was necessary to meet these needs are:

1. It was found that code communication was inadequate and that voice communication is absolutely necessary for a satisfactory train communication system.

2. Simplex operation is acceptable if means are provided to enable an operator to break into a conversation

when emergency requires.

It is considered necessary that train communication should enjoy the same secrecy as is enjoyed in ordinary telephone conversations as far as the world outside the

railroad right-of-way is concerned.

4. One of the conditions that influenced the Union Company to choose an inductive system instead of a radio system is the desirability of avoiding the necessity for allocations of frequencies and licensing of operators. This is not an absolute requirement, but is a convenience that will be appreciated by the railroad users.

5. The communication system should not interfere with other communication facilities and should not be interfered with by other communication facilities.

The apparatus should be reliable since in railroad operation the ability to transmit a message immediately is sometimes very important.

7. The apparatus must be rugged to the extent that it will operate satisfactorily and have a reasonable life

on board locomotives and cabooses.

8. The communication system should have the necessary range for communication between vehicles whether they are in the same or in nearby trains. This range is sometimes given as 5 miles. Between vehicles and stations the range should be much greater. In this question of range it is desirable that the communication equipment should have a range that is sufficient, and in order to keep interference down the range should not be very much more than is necessary.

9. It has developed recently, as the number of equipments in use or planned were increased, that it will be essential to make available two frequencies on vehicles in main line operation. This is in order to provide an additional channel for high priority conversations that cannot wait for other conversations to be completed and at the same time to provide a system by which it is possible for any operator to break in on all conversations in

the affected territory in an emergency.

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 The communication system should provide a signal to noise ratio that is adequate for satisfactory communication.

All the conditions enumerated are met by the Union inductive train communication system. It has a range between vehicles of something more than has been considered necessary in recent discussions, namely, 5 miles. The Union system has a probable minimum of 10 miles between vehicles. This additional distance is valuable because sometimes when communication between trains is necessary it is necessary also that the communication should go through promptly. Between vehicles and stations the range should be somewhat greater and the Union system is capable of providing a range of between 50 and 100 miles, depending to a small degree on conditions such as the proximity and the number of wayside wires.

The most important interfering noises are the noises from commutator motors and from sparking contacts. These have been given a thorough study and it has been found that they vary in intensity inversely with the square of the frequency that is being measured. This is one reason why it has been found profitable to go to frequencies above 10,000 cycles. A further suppression of noise relative to signal is obtained by the use of frequency modulated inductive train communication system we have a discrimination against noise that makes it possible to operate not only in congested industrial areas but even on electrified railway.

### Pennsylvania Railroad Equipment

The Union Company is at present building equipment for the installation on the Pennsylvania Railroad. It provides two frequency channels on all vehicles and at all wayside stations. The carrier frequencies for the two channels are 88,000 and 120,000 cycles respectively. The voice currents delivered from the microphone circuit modulate the carrier frequency delivered by an oscillator. The modulation is a frequency modulation and is accomplished by means of a reactance tube which varies the frequency of the oscillator over a predetermined range at a rate which depends on the frequencies of the voice currents. The output of the modulator is amplified in the driver and again in the power amplifier consisting of four The modulated carrier current goes to the 6L6 tubes. output transformer which supplies the energy to the transmitting loop.

At the receiving station the energy is picked up by receiving coils and is amplified in its received form in two stages of a carrier current amplifier. It is then heterodyned with the output of an oscillator to produce an intermediate frequency which we prefer to choose higher than the carrier frequency. The intermediate frequency which carries the initial modulation is then amplified through three stages, the last of which serves as a limiter. After this amplification it goes through a discriminator which is the frequency modulation term for a demodulator.

Here the voice frequency is separated out from the intermediate frequency. The voice frequency is then further amplified and delivered to the loud speaker or telephone receiver. The band of frequencies used in this system is about 6,000 cycles wide; that is 3,000 cycles on either side of the nominal carrier frequency. This makes available a voice band from approximately 200 to 2,750 cycles which is capable of giving a very satisfactory reproduction of voice.

The power supply consists of a dynamotor which is

energized from a battery in the case of a caboose or a diesel electric engine and from a headlight generator on a steam locomotive. Wherever possible a 32-volt supply is used. On diesel electrics it is sometimes necessary to provide for operation with a 64-volt, 78-volt, or even a higher voltage supply. This can be done either by a voltage changer consisting of rotating machines or a voltage reduction consisting of the necessary resistors in various forms. It is possible to build the dynamotors with the appropriate primary voltage so that no additional apparatus is required. This seems likely to be the most practical method of handling the various voltages that are likely to be encountered.

The power requirements of the equipment that has been described are approximately 300 watts during standby or reception and from 500 to 600 watts during transmission. These are extreme requirements and will probably be reduced.

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A 2-way 2-frequency vehicle installation, such as is being installed on the Pennsylvania Railroad, has one transmitter which is capable of transmitting on two frequencies. The changeover from one frequency to the other is made at the transmitter by means of relays which are controlled from the control panel. Such an equipment has two independent receivers, one for each frequency; one loud speaker, one hand set and two receiver coils, one of which is tuned to each of the two frequencies.

The transmitting loop is common to the two frequencies and is tuned to the desired frequency by additional contacts in the same apparatus that selects the frequency for the transmitter.

All the controls are assembled on the control panel and are indirect in that the circuits themselves are controlled over relays which are energized over circuits that center in the control panel.

Profits From Cab Signal Experience—In the development of train communication equipment, the Union Switch & Signal Company has profited greatly by its experience with cab signal equipment, in which it has been necessary for many years to build electronic equipment that was rugged enough to tolerate service on a locomotive with a reasonable life expectancy of all component parts. As a result of this experience and of the careful engineering that has been done in cooperation with the Pennsylvania Railroad, we have in this equipment apparatus that is not only rugged but very easily and conveniently serviced, and in which complete interchangeability is accomplished. The interchangeability extends even to the office equipments in that the receiver frames and the transmitter frames that are used on vehicle equipments will also be standard for the office equipments.

It is the hope that the equipment that has been described will become standard. There are obviously many advantages in such standardization. It will first of all make equipment from different parts of a road interchangeable so that when a locomotive that is equipped for one frequency has to be used on another frequency all that will be necessary will be to change the plug-in equipment. For a locomotive to travel over another railroad which uses the Union inductive system a similar change will be all that will be necessary to enable them to continue to profit by the use of their train communication equipment.

There is the other very obvious advantage that if the system can be standardized it will also result in lower cost of production and lower expense of maintenance, thus in every way increasing the economy of the use of train communication.

# Ex Parte 148 Hearing Concluded

Oral argument before full commission gets under way in reopened proceeding where railroads are seeking reinstatement of suspended freight-rate increases

WASHINGTON, D. C.

EARINGS before Interstate Commerce Commissioners Aitchison, Splawn and Mahaffie in the reopened Ex Parte 148 proceeding were concluded on October 31 and oral argument before the full commission got under way the following day. As noted in the Railway Age of October 28, page 660, the railroads, with the Office of Price Administration as their principal adversary, are undertaking to obtain reinstatement on next January 1 of the freight rate increases, amounting to about 4.7 per cent, originally authorized in the proceeding but suspended since May 15, 1943.

The hearings, which began on October 23, were expedited by the opening on October 26 of a "side show" before Examiner Copenhafer. There were received presentations from various individual shipper groups, state public utilities commissions, chambers of commerce, and other organizations. The railroad position in favor of reinstatement was endorsed in only two of these presentations before Examiner Copenhafer—those of N. W. Ford, traffic manager of the Manufacturers Association of Connecticut, and S. H. Williams, manager of the Transportation Bureau of the Philadelphia, Pa., Cham-

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The National Industrial Traffic League offered no testimony; its position favoring suspension of the increases for another period of six months is expected to be outlined in the argument of its counsel, John S. Burchmore. The League's position, determined by a recent vote of its executive committee, is a reversal of previous ones taken in the proceeding. It endorsed in principle the railroads' original petition, and offered no objection to continuance of the increases at the time of their original suspension.

### Southern and Western Traffic Officers Testify

The railroad presentation was concluded on October 25 with statements from four traffic officers in addition to those whose testimony was reported in last week's issue. R. J. Doss, traffic vice-president of the Atlantic Coast Line, appeared briefly to submit for the record a statement outlining the current and prospective traffic situation in A. C. L. territory. The statement pointed out that, beginning in 1940 and continuing into 1943, the government constructed or rehabilitated in or near that territory more than 150 war projects. These included cantonments, air bases, shipbuilding plants, holding and reconsignment depots, port of embarkation facilities, and storage facilities at or near the ports. The statement also noted how the war has diverted to southern railroads traffic formerly handled by coastwise steamship lines and trucks, and export and import traffic diverted from North Atlantic ports to South Atlantic and

Mr. Doss gave specific examples of the traffic A. C. L. is enjoying as a result of these wartime developments, but his study of trends since 1939 leads him to believe

that the downturn is about to set in. Assuming that the war in Europe will terminate during the latter part of 1944 or early in 1945 and that the war with Japan will terminate in the latter part of 1945 or early in 1946, he expects A. C. L. gross freight revenues to show declines of four per cent in 1944; 21 per cent in 1945, 31 per cent in 1946, and 41 per cent in 1947, as compared with the gross freight revenues earned in 1943. Also, Mr. Doss anticipates that the heavier loading of cars will not in the post-war period have the same favorable effect on net railway operating income as it has during the war emergency. It is likely, he said, that post-war loadings will reflect those of normal years and normal commercial conditions.

### 1941 Gross "Quite a Goal" for Post-War Era

L. R. Capron, traffic vice-president of the Chicago, Burlington & Quincy, introduced an exhibit showing total freight revenues and revenues by commodity groups for the years 1937 through 1943. Because there was in 1939 no normal reason why railroad traffic might be expected to go up, he attributed "almost the entire" increase since that year to the war, i.e., in turn, to the war in Europe, the United States defense program, and the entry of the U. S. into the war on two fronts. Looking at prospects for the post-war period, Mr. Capron conceded that the 1941 level of revenues from products of agriculture (13.5 per cent above 1939) might be set down as a "reasonable" post-war expectation. But he called the over-all level of 1941 revenues, which his exhibit showed to be 37 per cent above 1939, "quite a mark to shoot at."

If the railroads can collect post-war freight revenues at an annual rate 37 per cent above the last pre-war year, then they would be reaching "quite a goal," Mr. Capron said. And he knows of nothing tangible on which anyone could base an estimate that "we are going to exceed that figure." His attention was called to an estimate made earlier in the hearing by Walter S. Franklin, vice-president of the Pennsylvania, who testified on cross-examination that the 1945 business of the western roads might be off five per cent from 1944. Mr. Capron thought the figure was too low, adding that the Burlington estimate is that its own passenger business will be off 10 per cent and its freight business down 19 per cent.

E. W. Soergel, freight traffic manager of the Chicago, Milwaukee, St. Paul & Pacific, asserted that the "major portion" of freight revenues since the beginning of the war has been due to traffic which is "for the greater part directly related to the war effort." And when it declines or disappears, "we are faced with the evident certainty of shrinking revenue that will tax our ability to survive the period of conversion to civilian production and, at the same time, to operate and maintain the railroad plant and make the necessary improvements in facilities and equipment in preparation for the handling of post-war

traffic." Mr. Soergel also pointed out that the western roads have other traffic only "temporarily"—that which has been diverted from other transport agencies. He estimated that intercoastal business, aggregating annual freight charges of \$180 million, will revert back to the Panama Canal route "as hostilities gradually diminish and boats are returned to the service." Several other specific instances of "abnormal movements" on the western railroads because of the war were mentioned by the witness.

Indicating the over-all influence of war freight, he said that the ratio of charges on freight moving on government bills of lading to all freight for Western district roads was 30.33 per cent for the 12 months ended June 30, 1944. And this "does not include the enormous tonnage moving by reason of the activities of the government on commercial ladings between plants producing materials for the prosecution of the war, nor those shipments which move on commercial bills of lading for many agencies of the government, such as Commodity Credit Corporation, Rubber Reserve, Metals Reserve, and others." In closing Mr. Soergel reminded the commission that the bankruptcies of the 'Thirties hit the western roads heavily, adding that the carriers "should have money to take care of periods of depressed earnings and be in a position to improve their plants.'

T. B. Duggan, freight traffic manager of the Missouri Pacific, made a statement on behalf of southwestern roads, which are apprehensive lest the declines in net revenues soon bring deficits in the net income account. After referring briefly to the temporary nature of the government's war traffic, he went on to make a special showing as to the prospective loss by the southwestern lines of other added traffic they have enjoyed because of the discontinuance of water service between Atlantic seaboard territory and South Atlantic, Louisiana and Texas ports, "especially to and from points in Louisiana and Texas." Detailed figures on some 12 different commodities were

given by Mr. Duggan to make his point.

### Short Lines Need Additional Revenue

Last of the railroad witnesses was J. P. Nye, secretary-treasurer of the American Short Line Railroad Association, who testified briefly in support of that organization's petition for restoration of the increases, introducing exhibits showing revenue and income statistics of Class II and III roads and all classes of switching and terminal carriers. Comparing the first half of this year with the like 1943 period, Mr. Nye put the drop in the net railway operating income at "almost 20 per cent," and the decline in net income at "approximately 30 per cent." There was no substantial change in gross, so the declining net was attributed to increased wage and material costs. The former took 49.8 cents of the short lines' revenue dollar in the first six months of this year, as compared with 45.4 cents in 1943, and 43 cents in 1942.

Short line material costs have gone up relatively more than those of Class I roads, being in 1943, 47 per cent greater than in 1939, Mr. Nye said. He explained that the small roads, generally speaking, do not purchase materials and supplies in very large quantities at one time, and thus do not get the consideration in price that the larger carriers receive. In closing Mr. Nye adopted for the short lines the presentation of the Class I roads, especially the showing as to "general economic conditions, trends in traffic, traffic flow, and kindred matters."

Meanwhile, the railroad presentation had been interrupted briefly for the testimony of Brigadier General A. F. McIntyre, chief, Rail Division, Army Transporta-

tion Corps, who appeared at the request of Special Counsel Max Swiren of O. P. A. In his cross-examination of railroad witnesses Mr. Swiren had referred to statements as to traffic prospects following the close of the European war, which had been made by General McIntyre in a

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Making it plain that he was appearing as an individual and was not speaking for the War Department, General McIntyre expressed the view that war traffic on eastern roads will remain heavy following V-E Day. He expects Atlantic and Gulf ports to be used to some extent in supplying the Pacific war, and anticipates, too, that some of the east's training facilities will continue in operation. Also, he pointed out that the turn of traffic to the west will increase the average haul; for the Pacific ports will be used to full capacity. Responding to questions from J. M. Souby, general solicitor of the Association of American Railroads, General McIntyre agreed that his testimony was not intended to imply that the total military effort after V-E Day will exceed that of today.

### War Department Neutral on Restoration

Later on the War Department made its official presentation, its position, as stated by its counsel, Lieutenant Colonel Thomas E. Sands, Jr., being no position either for or against reinstatement of the increases. If the rates are restored, the War Department has no request to make; if there is to be a further suspension or cancellation, it wants the orders "clarified" so that the suspension or cancellation shall apply to all published tariff rates. Through the War Department witness, Major G. R. Lyman, it was brought out that many rates on War Department traffic still include the increases, because of that provision of the commission's suspension order which permitted their continuance on special "emergency" rates published at the request of some government department.

Appearing on behalf of American Trucking Associations, Inc., John C. McWilliams, director of its Department of Research, stated that A. T. A., having opposed previous suspensions, still feels that the railroads need rate increases. Particularly does the trucking association feel that the rail carriers are "in need of very large increases in less-than-carload rates," and one of Mr. McWilliams' exhibits was directed to that matter. He arrived at a 1943 out-of-pocket deficit for l.c.l. of \$98,169,166. Other data presented by Mr. McWilliams brought up to date previous A. T. A. presentations in the proceeding on the financial condition of the trucking industry.

Clair M. Roddewig, general counsel of the Office of Defense Transportation, appeared briefly to urge that before the commission authorizes or directs a reduction in passenger fares, it should "carefully consider the effect such a reduction will have upon existing passenger transportation problems." O. D. T. is not concerned "with the question of more or less revenue for the carriers," but it is of the opinion that a fare cut "will stimulate travel," thus further complicating an "already critical situation" and making it "more difficult to provide adequate transportation for the military and essential civilian travelers."

### O. P. A. Presentation

A general reduction in passenger fares, Mr. Roddewig went on, "may well create in the public mind the erroneous opinion that there is a surplus in rail transportation facilities and that it should take advantage of the lower fares and travel more." Later James S. Earley, head economist, Office of Economic Advisor, O. P. A., commented that it would be "quite inappropriate" to use

Railway Age-November 4, 1944

price as a means of rationing goods and services— O. P. A. policies have been "quite the contrary."

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Economist Earley's main presentation was an exhibit of some 76 mimeographed sheets with statistics and other material on price movements, traffic prospects for the remainder of the war and the transition to peace, reconversion and post-war pricing policy, railroad revenues, expenses and net income, passenger operations, maintenance, and financial condition of the railways. His estimates of future traffic prospects were more optimistic than those of railroad witnesses, assuming, as he did, that government and industry cooperation should be forthcoming to maintain production and employment at high levels in the post-war era.

It was Mr. Earley's opinion that a reinstatement of the freight-rate increases would be "extremely disturbing" not only because, as he put it, they would raise costs and break price ceilings already under heavy pressure; but also because they would provide a "striking example" of a reconversion pricing policy of making money at low levels of output. This, Mr. Earley went on, would have a "very serious" psychological effect throughout industry generally. Meanwhile, permanent cancellation of the increases would make O. P. A. executives "breathe much easier." And revocation of the passenger fare increase, which O. P. A. also asks, would have a desirable psychological effect, Mr. Earley added. At another point Mr. Earley defended the O. P. A. figures on comparative wartime prosperity of the railroads, which were adjusted by Dr. Julius H. Parmelee, director of the Bureau of Railway Economics, A. A. R., as noted in last week's issue.

### An "Awfully Rough" Indication

Mr. Earley was subjected to close cross-examination on his statistics and predictions by A. A. R. General Solicitor Souby and John Dickinson, general counsel of the Pennsylvania. Also he got several questions from the bench, including those wherein Commissioner Aitchison brought out that the revenue per passenger-mile shown in one of the exhibit's tables was computed by using as the dividend total revenues from passenger-train operations, including mail, express and milk revenues. Mr. Earley thought the method gave a "rough indication" of the revenue per passenger mile; but Mr. Aitchison called it "awfully rough," since it showed for the Pocahontas Region (where passenger traffic is unimportant) figures for 1929, 1930 and 1931 above five cents per mile—some two cents higher than the maximum fares fixed by the commission.

The O. P. A. case was concluded with the testimony of Jacob L. Mosak, chief of the Economic Analysis and Forecasting Branch of its Research Division. He discussed an exhibit wherein he had estimated railroad revenues, expenses, and income for 1945 on the basis of three different assumptions. These "projections," was the exhibit called the estimates, undertook to arrive at next year's net income before federal income taxes, assuming various percentages declines from 1944 in tonmiles along with slightly increased passenger traffic, or varying percentage decreases in passenger traffic, or changes in the length of haul for freight and average journey per passenger. At one point in his quest for clarification of the exhibit, General Counsel Dickinson of the P. R. R. confessed his inability up to that time "to understand the table at all."

Speaking generally of the outlook for 1945, Mr. Mosak said that he did not look for a drop from 1944 ton-miles of more than 10 to 12 per cent, assuming the European

war would end this year and there was no substantial change in the length of haul. The "projections" table indicates that a decline of 10 per cent on the basis of such assumptions would result in a 1945 net income before federal income taxes of \$1,792,000,000. Mr. Mosak anticipates no important decline in passenger traffic in 1945; he expects it to be held up by the homeward journeys of such troops as are demobilized, the westward movement of forces for the Pacific war, and remigration of workers, following cut-backs in defense plants.

### Department of Agriculture

The joint presentation of the Department of Agriculture and War Food Administration was made by Ralph L. Dewey, principal transportation economist of their Office of Distribution. He recalled the Department of Agriculture's previous opposition to the increases, and its contention to the effect that if such increases were allowed, the rates on agricultural commodities should be increased less than those on other traffic. The suspended increases treated agriculture that way, its increase having been three per cent as compared with six per cent on most other commodities. In opposing reinstatement, Mr. Dewey asserted that the financial results of the railroads "have continued to be extraordinarily favorable," from the time of the suspension in May, 1943, to date. For the making of this point he likes best the figure of net railway operating income before federal corporation income and excess profits taxes. It shows, as he put it, that "the increase of rail net earnings during the war has been truly phenomenal," the lower net income figure for 1944 than for 1942 and previous years being due to increased income taxes and rising costs growing out of war conditions. Even at that, it is still "very high and compares favorably with the best previous records in railroad history.'

Mr. Dewey expects that the post-war period will see a "record production" of consumers' and producers' goods because of the backlog of wartime shortages backed up by the "great accumulation" of purchasing power in the hands of buyers. As for agricultural production and traffic, "there is every reason to believe that a high level will be maintained at least for the duration and six months thereafter." The witness was apprehensive lest the cost of living be increased by higher rates on agricultural and livestock products, which, he said, now bear an annual freight bill of "well over \$1,000,000,000." He was also concerned because the increased revenues might go to "prosperous railroads," which he defined as those "which have escaped receivership or trusteeship during the great depression of the 1930's." Mr. Dewey has calculated that "prosperous railroads," as thus defined, would get approximately 80 per cent of the additional revenue if the increases were reinstated.

### Dickinson Opens Argument

Mr. Dewey was followed by Elmer W. Cart, North Dakota director of tax research and traffic for the Farmers Union, whose brief testimony called for cancellation of the freight-rate increases and revocation of the passenger-fare increase, too. The final witness was R. L. Ettenger, Jr., finance and taxation assistant, Finance, Accounting, Taxation and Valuation Department, A. A. R. He presented a statement, with several specific examples, outlining the principles involved in the computation of federal income and excess profits taxes after the determination of taxable net income.

Opening the argument on behalf of the railroads, Gen-

eral Counsel Dickinson of the P. R. R. asserted that the main question raised by the case was whether the commission can afford to wait until the railroads are in serious condition, or whether it should act now to prevent undesirable consequences. The commission, he went on, is faced with a "business decision" of the kind that would have to be made by management in a nonregulated industry.

As in all business decisions, time is "a most important element"; and the evidence indicates that the situation of the railroads "is going to become acute fast."

Despite the "school of economists" who regard insolvency as the solution of all business difficulties, Mr. Dickinson asserted that solvency will be a necessary element in whatever kind of economy the post-war era may bring. The railroads, he added, are asking only that they be permitted to earn enough to maintain their credit; they are not now seeking more dividends for their owners, even though they are not at all ashamed to claim the right to earn dividends as a necessary incident to the maintenance of credit in a system of private enterprise. The evidence, as appraised by the P. R. R. general counsel, indicated that the railroads' ability to carry the load of increased wartime expenses and taxes has been due to the heavy and increasing volume of traffic. The tendency of the gross to begin leveling off, he added, constituted a "danger signal," pointing to the time when the net will disappear. He did not claim that this time has arrived, "but it is in sight."

A drop in the 1945 net income to \$250 million, as predicted by Dr. Parmelee, would bring a "very dangerous situation," Mr. Dickinson warned. He proceeded in an undertaking to show that even if that estimate were low by as much as \$200 million, the situation would still be critical; for he calculated, on what he called a conservative basis, that a minimum annual net income on the 1944 basis (\$650 million) would be needed in the years

immediately ahead.

Among other things that income, as Mr. Dickinson assigned it, would be needed for the following: Installa-

tions of AB brakes, \$56 million a year for three years; deferred maintenance, \$117 million a year for three years; new way and structures facilities, \$245 million a year for five years; dividends necessary to maintain credit, \$200 million a year. As Mr. Dickinson pointed out, he included nothing in the foregoing for down payments on new equipment or amortization equipment trust certificates, which would amount to \$100 to \$110 million a year on the basis of the annual acquisition of \$350 million worth of equipment, said by Dr. Parmelee to be necessary in each of the five post-war years. The omission was due to an assumption that equipment depreciation charges, if relieved of any burden in connection with AB brake installations, would take care of the equipment financing. In like manner did Mr. Dickinson deduct the road and structures depreciation charge of \$105 million a year from the estimated necessary outlay of \$350 million a year on

such facilities to arrive at the net figure of \$245 million included above for that item.

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### Tears into O. P. A. Case

The P. R. R. general counsel then proceeded to tear into the O. P. A. case, which he set up as embodying three main points—that the railroads have "hidden resources" in the form of wartime amortization charges. prospective tax refunds, etc., upon which they should call; that they neither need nor deserve the rate increase because the wartime improvement in their earnings has been relatively better than that of industry generally; and that in any event the carriers ought not to have the increases because prosperous industry during the period of transition from war to peace is not in accord with O. P. A.'s economic theory. Mr. Dickinson found the latter set down in O. P. A. Economist Earley's testimony on cross-examination, which the P. R. R. general counsel interpreted as holding that the railroads should be denied relief, even though that involved operating at a loss, for a year or so as they waited to see if the general economy revived and hoped to be made whole by tax refunds.

He characterized the whole O. P. A. case as unsound and untenable, "if we are still living in a world where the rules of simple arithmetic are still valid." It is, Mr. Dickinson said at another point in his argument, "a program deliberately to let the railroad industry sink into insolvency, squeeze out thousands of investors through a new epidemic of bankruptcies and section 77 proceedings, and force a vast government subsidy on the industry under the guise of gigantic tax refunds, when it only asks to be permitted to earn its way and stand. alone. . . . It is a shining example of the policy of reform through chaos which is running mad in the world today." In closing the P. R. R. general counsel offered for the record a list of references to reports in the Federal Register of price increases authorized by O. P. A. on commodities "many of which the railroads must buy."

"Sparky" Photo
We Thought "Zulus" Were Largely a Matter of History, but Here Is 16-Year-Old
Bud Williams Moving His Family's Chattels via the S. P. from a Southern
California Ranch to Springfield, Ore.

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# Electrical Section **Issues Reports**

THE Committee of Direction of the Electrical Section, Engineering Division, A. A. R., met in Chicago on October 25, 1944, to consider the six reports presented to the Section and to plan future activi-There was no general meeting of the Section.

Of the six reports published, three are progress reports. The others are respectively the reports of the committees on power supply, electrolysis and track and third-

rail bonds.

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Power Supply-The report of the Committee on Power Supply includes reports from three railroads to show how capacitors have been installed on power circuits to improve power factor, to defer the installation of transformers and feeders, to save cost of power and to improve voltage. In one case cited, the installation of 300 kva. in capacitors effected a saving of \$1,000 a year.

The power supply report also describes and illustrates the manner in which inside power feeders in enginehouses are being used to conserve labor and material and

avoid the damage to outside feeders by icicles.

Electrolysis-During the past two years, the Committee on Electrolysis has been making tests on the effectiveness of concrete to reduce the electrolytic corrosion of steel buried in the ground. The test program was undertaken because of damaging effects of current flow to ground through reinforced concrete structures. For the purpose of the test steel specimens were encased in

various thickness and mixes of concrete, and these specimens were buried in the ground and all subjected to the same d-c. voltage. Mixtures of 1-3-5 and 1-2-3 were used and to some were added admixtures of Celite, Morene or hydrated lime. One specimen was given an

outside coat of asphalt.

The most important tentative conclusion of these tests to date is that there is little difference in the insulating properties of the various methods except in the case of the asphalt coating. The specimens with the asphalt coating show current flows of the order of only about one-tenth that of the other methods. The report adds, "Passage of time may modify this result so that further results should be awaited before final conclusions are

Track and Third-Rail Bonds-The report of the Committee on Track and Third-Rail Bonds consists of data furnished by eight railroads and one manufacturer concerning the effect on various types of bonds due to

building up rail ends with the bonds in place.

Concerning the use of both welded and pin-type bonds the report states: "1. Less damage to bonds is caused by building up rail ends by electric welding than when gas is used, because less heat is generated and because the arc can be more rapidly controlled. 2. The wet asbestos pack constitutes effective protection, but is seldom used. 3. In the end, removal of the bond, if of the signal type, is the only certain method of preventing injury. 4. In heat treatment of rail ends, involving higher temperatures than for building up rail ends by either electric or gas welding, bonds must be removed if they are to be

### Communication . . .

### The Case for Smaller, More Frequent Trains

TO THE EDITOR:

PORTLAND, ORE.

Concerning what railroad management may do to insure the future of competitive capitalism in transportation, please refer to an article in the August issue of "Fortune" on railway passenger service and another article in the September issue on the Greyhound Bus System. From reading these two articles, one may gather the impression that a "monopoly" rather than a "competitive" price condition exists in the field of railroad coach and bus transportation. It appears that the Interstate Commerce Commission contributes to this situation by its official method of calculating "overheads" on right-of-way, in proportion to train-hours. This method of calculating overhead throws an undue proportion of the overhead cost of operating the railroads on passenger and local freight service.

This method of calculating overhead tends to encourage the railroads to operate as few trains and as long trains as possible. This, in turn, reduces the flexibility of service offered, increases terminal delays and costs, minimizes jobs for employees. This method throws an unduly high charge on passenger service, thereby destroying a great deal of potential public interest, sympathy, and understanding of railroad services and problems. It also discourages the development of small, high-speed freight

trains to meet truck and, soon, air competition.

If the railroads would use the technique developed in handling army vehicles, and the open-top equipment used therein, in building up a ferry-truck business open to all comers, they would be looked upon as the friend of small business and the

champion of competitive capitalism. The trucker, being a relatively small business man, in most cases, develops sympathetic

understanding from other small business men.

The railroad employee, when he sees a bus or truck bearing his company's emblem, tends to have a feeling of resentment because of the lost railroad jobs he may be inclined to impute to such service. This feeling does not arise in connection with buses and trucks used as feeders to railroads but to those running parallel to the main line and offering service at an arbitrary rate differential below that of the railroad. Some railroad men tend to consider the railroads as an institution where the big trust companies can "farm out" their excess money on big engines, which yield fewer jobs and less frequent and less flexible service, driving a great deal of business onto the highway.

There has been much talk of decentralization of industry and a definite trend in that direction, but the railroads with their monstrous big engines, long trains, and no local stops are bucking the trend. Has the "private" capital of the railroads and the trust companies with these policies of high prices and poor service shown itself to be worthy of support from railroad labor, small business, and the farmers as against government "socialized" control of the highways which tends to give the people

low-cost transportation even if it is subsidized?

Then there are such merger proposals as the Prince plan, reputedly favored by many big railroad men. This plan of giving the weak roads to their nearest competitors and thus setting up a system of regional monopolies is hardly one to make the folks out in the country believe in "competitive" capitalism.

Of course, there is the come-back that monopolies should be "controlled" or "regulated" by the government. But, how much control? How can a government regulate a business in an everchanging world if it has no yardstick with which to measure the success or failure of that business? And how can the man in the street know that the tail isn't wagging the dog?

By putting their own houses in order, the railroads (and the trust companies who own the equipment) can furnish the leadership to make our economy live.

R. J. HARROD

# Railroads-in-War News

# Biddle Has Young In for a Conference

Anti-trust discussion with financier is criticized by C. E. Johnston

Conferences were held October 26 by Robert R. Young, chairman of the board of Alleghany Corporation and of the Chesapeake & Ohio, with Department of Justice officials, including Attorney General Biddle, to discuss the pending anti-trust suit in which various western railroads are defendants, as are railroad officers, the Association of American Railroads, and other organizations; and, on the following day, C. E. Johnston, chairman of the Western Association of Railway Executives termed the conference "amazingly irregular."

What Young and Biddle Talked About—A formal statement issued at the time of the Biddle-Young session, "with the approval of the attorney general," explained that the conference had dealt with "certain questions relating to certain of the charges in the government bill of complaint," especially those concerning the "Western Agreement," and the department's contention that under that agreement "rates were fixed by the railroads without authority of the Interstate Commerce Commission."

The statement pointed out that Alleghany Corporation has a substantial investment in the Missouri Pacific, one of the defendants in the anti-trust case, in which the government has charged "collusive rate fixing and agreements to limit services and suppress technological improvements." Mr. Young was quoted as having "expressed himself as having the view that the public interest and the development of competitive enterprise in this country could be served by a modification of certain practices within the railroad industry."

Further Sessions Planned—As a result of this conference, it was explained, representatives of Alleghany and the department "have begun a series of conferences, with the purpose of formulating a constructive solution to the problems discussed."

"The western railways are not negotiating a settlement of the anti-trust suit filed against them by the Department of Justice at Lincoln, Neb.," Mr. Johnston said, "nor have they been asked to discuss the matter with the Department of Justice at any time. It would appear that we are being treated to another one of those spectacles for which the attorney general is fast becoming famous. Mr. Biddle files suit against the western railroads and then enters into

amazingly irregular negotiations with the head of an eastern financial corporation, successor to the Van Sweringen interests, who was not named a defendant, who admitted he was not speaking for the railroads, and insisted he was not passing judgment on the merits of the suit."

At the conclusion of Mr. Biddle's conference with Mr. Young, Mr. Johnston continued, the attorney general issued a statement saying that "representatives of the Alleghany Corporation and the Justice Department are continuing talks aimed at formulating a constructive solution of the problems posed by the railroad suit." Mr. Biddle quoted Mr. Young as disapproving of carriers acting in concert to oppose technological improvements and perpetuating practices contrary to the public interest.

"Low Antics," Even for Biddle—
"I heartily concur in these generalities, even while resenting their implications," said Mr. Johnston, himself a defendant in the suit. "It comes close to hitting a new low in the antics of Mr. Biddle.

"It was probably more than a coincidence that while the attorney general was blasting the western railroads in Washington, his first assistant, Wendell Berge, was attacking them before the Farmer's Union convention at Chippewa Falls, Wis. Such concerted efforts to prejudice the public against the railroads while they are facing trial at Lincoln, Neb., smacks of the Gestapo brand of justice."

### I. C. C. Service Orders

The Interstate Commerce Commission has reinstated its Service Order No. 160, which has to do with the holding for orders of carload shipments of grain at certain points in Minnesota, by order No. 160-B, effective October 29 until further order.

The commission has vacated the following service orders: No. 200, which restricted the icing of refrigerator cars loaded with potatoes; No. 245, which set up a permit system for cotton moving to Memphis, Tenn., and West Memphis, Ark.; and No. 224, which restricted the icing of refrigerator cars loaded at points west of the Mississippi river with fresh or green fruits or vegetables. The order vacating No. 245 was effective November 1, while the two others were effective October 31.

Railroads concerned in the potato movement from Maine have been advised by W. C. Kendall, chairman of the Car Service Division of the Association of American Railroads, that instructions in effect last year concerning the use of car heaters in this movement will again apply this year, and that the commission and the Office of Defense Transportation have been assured that the railroads will police the traffic so as to provide the best possible handling of the heaters, as will the company supplying the heaters.

# Feeding Them All A Big Assignment

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Heads of dining departments get on record with some memorable experiences

Feeding millions of travelers under the handicap of rationing and food and labor shortage was pictured as one of the railroads' biggest problems in addresses to a recent meeting of the Pacific Railway Club by H. A. Belt, manager of the Fred Harvey system on the Atchison, Topeka & Santa Fe; H. A. Hansen, manager of the dining car and hotel department of the Union Pacific; and H. A. Butler, manager of the dining car, hotel, restaurant and news department of the Southern Pacific. More than 30,000,000 meals were served in Santa Fe restaurants and dining cars and 5,000,000 sandwiches were sold on Santa Fe trains in 1943, said Mr. Belt in outlining the magnitude of that railroad's operations.

700 Meals per Car-Day—In these times, it is not unusual for a 36-seat dining car to serve 700 meals in a single day (300 breakfasts, 150 luncheons and 250 dinners). Of the Santa Fe's 30,000,000 meals in 1943, 8,000,000 were served to members of the armed forces. To provide the raw materials for all these meals the purchasing department bought 512,000 lb. of coffee (20,480,000 cups), 662,000 lb. of butter, 1,117,000 gal. of milk and cream, 1,250,061 lb. of sugar, 2,423,400 lb. of flour, 4,616,400 lb. of potatoes, 956,840 lb. of fish, 2,493,595 lb. of poultry, 5,172,835 lb. of meat and 1,408,-184 doz. eggs.

Meals served to the armed forces, Mr. Belt said, represent about 25 per cent of the total restaurant and dining car volume last year and about one-third of these meals were served in dining cars. To feed the armed forces, small dining stations were called upon to serve as many as 2,000 soldiers in a single day. The Los Angeles union station fed more than 5,000 members the armed forces in one 24-hr. period.

Volunteers Help Feed Soldiers-Normal facilities proved inadequate for such an influx of hungry people, Mr. Belt continued, and, as a result, special mess halls were built at larger stations for service men, while at many dining stations tables were placed on porches, in lobbies or elsewhere. Competent help, many foodstuffs and several items of equipment-especially china, glassware, silverware, linens and kitchen utensils-are hard to get, but longestablished sources of supply are proving helpful. Old-time employees are standing by, putting in long hours. In small towns in the Southwest, regular staffs have been augmented by women volunteers-members

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of clubs, lodges and churches and wives of railroad men—who help feed the fighting forces. These women are on call day and night. In one city a nearby business college makes a practice of dismissing women students whenever help is needed for feeding

men on troop trains.

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Securing sufficient food for station restaurants and particularly for maintenance of way employees' board under the handicap of rationing is a major problem on the Union Pacific, Mr. Hansen stated. When meats were first rationed, he said, the U. P.'s allowance, including butter, cheese, canned meats, fish, seafood and condensed milk, was equivalent to 2 lb. per week per man or 1½ oz. per meal "and anyone who knows how railroad men eat can readily understand that something had to be done to afford them the kind of meals they should have."

Townspeople Excluded—As the first step, all station restaurants were closed to townspeople but this did not produce enough meat, butter, cheese, etc., to provide the substantial meals required for maintenance of way forces, he continued. The company then asked the O. P. A. for 5 lb. of meats, butter, cheese, etc., per man per week, planning to use poultry and fish to complete the menu, but it was inclined to abide by its standards of average caloric requirements. However, he said, it finally issued a supplementary ration order which allowed more foods for railroad and other workers located in isolated areas.

Before the war, he continued, helper crews were able to obtain meals at small town restaurants where the crews cut out, but when many restaurants were forced out of business, the U. P. had to serve the crews on a 24-hr. basis or pay restaurant operators a monthly subsidy to enable them to keep open 24-hr. a day. At its Albina shops in Portland, where shipyard competition for employees is great, the U. P. has had to serve lunch, dinner and a midnight

meal to shop employees.

Only Two Squares per Day-The U. P. dining car operations, he said, have had the same problems as those of other railroads, including insufficient cars, too much business and not enough help. Because of the scarcity of food, the U. P. and the Southern Pacific established the practice of serving only two meals a day, breakfast and dinner, on dining cars. In addition, the U. P. has eliminated a la carte service and menus have been simplified to provide fast service and to conserve food. Hot cakes and poached eggs have been taken off all menus, while on the "Challenger" trains the inability of inexperienced help to time the boiling of eggs according to altitude has necessitated the removal of boiled eggs from the menu.

To meet the shortage of dining cars, he said, the U. P. removed the furnishings from some lounge cars and installed a lunch counter, refrigerator and coffee urn so that box lunches, sandwiches, doughnuts, sweet rolls, fruit, candy bars, coffee, milk and soft drinks could be served on coach trains. These cars are operated as a helper to the diner and give all-day service.

S. P. Short 50 Diners—The Southern Pacific in 1943, Mr. Butler said, served Cassius Clay Away on a Mission to Europe

The Baltimore & Ohio's general solicitor, Cassius M. Clay, has been granted a leave of absence to enable him to serve on a United States delegation to an international conference in London, to make arrangements regarding inland transportation in continental Europe, after subjugation of the enemy. Heading the U. S. delegation will be Ambassador (to Britain) John Winant and Major General Frank Ross.

Born in Paris, Ky., Mr. Clay is a graduate of Yale Law School. From 1932 to 1941 he was counsel on railroad matters for the R. F. C., and has been in B. & O. service as general solicitor since the latter date.

about 23,000,000 meals and varied food items on its trains and other food service units, a volume never before approached on this railroad. In that year, the dining car department served 1,755,422 lb. of poultry and 520,635 lb. of fish as compared with 475,582 lb. of poultry and 307,845 lb. of fish in 1942. The S. P. operates 135 dining cars, has converted 15 lounge cars into dining units, has leased 12 dining cars from other railroads and is still short about 50 cars. Many dining cars make two trips where formerly they made but one and some are regularly assigned to military trains.

The S. P., he continued, is serving more military and naval establishments than any other railroad. Military movements handled exclusively by the Army and Navy frequently call upon the dining car department for assistance, sometimes asking for

help as well as foodstuffs. This may mean, he continued, the securing of thousands of loaves of bread, hundreds of gallons of milk, etc., on short notice for delivery to an Army special train in a town whose normal supply of such foodstuffs is insufficient to meet the demand.

Volunteer Help Enlisted—Manpower shortage, Mr. Butler said, is the most serious problem confronting dining car departments. Most of the best cooks and waiters have been called for military service and it is difficult to train new help. Because of the shortage of help, stewards occasionally call for volunteers among service men passengers to assist in the preparation and serving of meals to military groups. They are paid in cash by the steward.

### 3rd M. R. S. Still Delivers the Goods to Russia

Despite adverse operating conditions, the Military Railway Service in the Persian Gulf Command has exceeded its goal of tonnage to Russia, and recently the 3rd M. R. S. celebrated delivery of the 1½ millionth ton of war freight to that fighting front. This had been accomplished in little more than one and one-half years of operation.

In a release from Camp Amirabad, Teheran, Iran, Headquarters of the Persian Gulf Command describes the conditions under which these army railroaders have

been operating:

"From the ports of Khorramshar and Bandar Shapur on the Persian Gulf to Teheran, almost 700 miles to the north, this tortuous single-track winds its way through diverse terrain. It runs through hundreds of miles of burning desert where the sun temperature reaches 175 degrees; through



Official Photo, P. C. C.

Sgt. Mark Watson, of the M. R. S. Persian Gulf Command, Being Interviewed by the Staff of the American Expeditionary Station, Teheran, Iran. And from Left to Right: Capt. H. L. Downs, T/5 Larry Brown, Sgt. Mark Watson, Pfc. Jacques Sammes, and (Kneeling) Staff Sgt. William H. Barr

the 135 tunnels, totaling 37 miles in length in 165 track miles; from sea level at the Gulf to an elevation of 7,200 feet in the Elborz Spiraled switchbacks, curving mountains. tunnels and circuits showing sometimes as many as four elevations of track, one above another, enable the railway to reach the necessary height with a grade of 1 in 32."

The accompanying photograph shows the recording of an interview by the staff of the American Expeditionary Station in Teheran with Sgt. Mark Watson of the 3rd M. R. S. This recording is to be sent to other commands for the information of troops throughout the world.

### Legion of Merit and D.S.M. Are Awarded General Yount

Double honors were accorded Brig. Gen. Paul F. Yount, director of the Military Railway Service in the China-Burma-India theater, when recently he received from Major Gen. W. E. R. Covell, commanding general of the Services of Supply, the Distinguished Service Medal and the Legion of

For "outstanding performance of duties" while head of the M. R. S. in the Persian Gulf Command, he was awarded the Distinguished Service Medal. The citation said, in part, that he operated the Trans-Iranian Railway, over which supplies were sent to Russia, with "less than half the operating and maintenance units considered necessary."

Previous recognition was his when, in June, 1943, General Yount was acclaimed by Maj. Gen. Donald H. Connolly, commanding general, Persian Gulf Command, for his "not only technical, but personal qualifications to run a railroad under very difficult circumstances." In April, 1944, he was awarded also the Order of Kutuzov, Third Class.

The award of the Legion of Merit now goes to General Yount for "exceptionally meritorious conduct in the performance of



U. S. Army Signal Corps Photo

Maj. Gen. W. E. R. Covell Pinning the Awards on 36-Year-Old Brig. Gen. Paul F. Yount, One of the Youngest A. S. F. General Officers.

### Slocum T. C. Officers' School Closes

The Atlantic Coast Transportation Corps Officers Training School at Fort Slocum, N. Y., graduated its last class of T. C. officers on October 28-after about two years' of operation, during which approximately 2.100 officers have been graduated (slightly less than half of them being officers of the Military Railway Service).

Major General Charles P. Gross, the Army's chief of transportation, was graduation speaker to the October 28 class. He told how, in developing an efficient transport organization, the Army has relied, rather, on turning qualified transportation men into soldiers, than on trying to train military men as transportation experts; and the work which the Transportation Corps (and particularly the Military Railway Service) has done in theaters of war, testifies to the wisdom of this policy.

The Fort Slocum school has been the place where superintendents, trainmasters, master mechanics and other railway supervisory officerstransformed by fiat into colonels, captains, and lieutenants-have learned the elements of soldiering, in a few weeks of intensive instruction under the veteran direction of Colonel Bernard Lentz, school and post commander. The proficiency which these middle-aged military neophytes have shown at drill, calisthenics and the handling of weapons at the demonstrations which always accompany graduating exercises, has continually astonished civilian guests at these ceremonies.

outstanding service" when he was commanding officer of the American port installations at Karachi, India, from March to October, 1942. At that time, this port was the most vital unloading point for supplies entering the C. B. I. theater. While colonel in that position he was cited also by Lt. Gen. Joseph Stillwell, formerly commander of the C. B. I. theater.

In his present command, General Yount is responsible for the military operation of part of the meter-gage Bengal & Assam-Railway, over which supplies are carried to the troops in Burma. (For a complete resumé of General Yount's army career, see Railway Age of August 12, page 273.)

### Jeffers Trustee of Committee for Economic Development

W. M. Jeffers, president of the Union Pacific, has been appointed a member of the board of trustees of the Committee for Economic Development, its chairman, Paul G. Hoffman, announced October 29.

"The C. E. D. could have found no more representative American to help guide its effort to stimulate creation of 7 to 10 million more postwar civilian jobs than the country could offer in 1940," said Mr. Hoffman, commenting on the appointment. "This is an effort to provide jobs through voluntary co-operation of business, labor and agriculture, with the co-operation of government. Mr. Jeffers has risen to his present position in the traditional American way-from messenger boy to president. He guides one of our great transportation systems, and he still holds his union membership card in the Telegraphers' Union," the chairman added.

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### U. P. Diesel Goes 1,049,000 Miles Without Major Overhaul

Diesel-electric locomotive No. 9-M-1A of the Union Pacific, one of six normally assigned to its Kansas City-Denver run, completed more than 1,049,000 mi. from August, 1940, to September 30, 1944, without a major overhaul and, according to present plans, it will not be shopped until sometime in 1945. The performance of this locomotive follows those of the "City of Denver" of the U. P. Chicago & North Western, each of which traveled more than 3,000,000 mi. in eight years without being shopped for repairs.

### P. R. R. Railway Operating Bn. Sees Action in France

A railway operating battalion sponsored by the Pennsylvania, which arrived in France a little more than two months after "D" day, has been kept busy operating alternate and secondary French railway lines to carry supplies to the fighting front, and make these lines take the place of main lines put out of service by demolition.

Headquarters, European Theater of Operations, reports that the battalion, under the command of Maj. Benjamin F. Hanst, Pittsburgh, Pa., has run into "all the hazards and difficulties that the war could spring on it." Unable to use the main line, the army railroaders found that all communications had been torn down, and though station to station communication was restored, relieving part of the trouble, this did not permit first-class operating practice.

Other difficulties included bad stretches of track, compelling long detours, of "operating crews who found themselves rollercoasting up and down grades that would reduce running speed to 5 m.p.h. and then raise it to 40 or 50 m.p.h." The work of dispatchers and crews was described as "rather complicated," and often crews sent out on a first assignment failed to return-"they were needed where they were and that was all there was to that." Further, it was said that "crews still with the unit would leave on a journey that would not require their moving from the unit's territory, but the flexibility of the situation would end with their going on for many more miles and not returning for 10 days. This fluid situation of dispatchers and operating crews it is said, seriously affected smooth functioning of headquarters sections of component companies and the battalion. Responsible for keeping a daily record of all personnel, these headquarters never knew where the men were or if absence had been authorized.

When first in France the battalion left some of its operating crews at various railroads while en route to its assignment. This was done to relieve the burden placed on other units by a growing stream of

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supplies to be transported. One crew, guided by veteran crews of another battalion, conducted itself so ably it was permitted to run the first train into Paris. Members were. Sgt. R. M. Heighley, New Kensington, Pa., acting as engineer; Sgt. Scott Young, Frankfort, Ind., as conductor; Pfc. C. L. Foster, Mansfield, Tenn., freman; Pfc. R. H. Hubert, Flintville, Tenn., brakeman, and Pvt. G. W. Klein, Pittsburgh, also a brakeman.

It was during this period that there occurred the only casualty suffered so far by this outfit. When a gasoline train with engines at the head and rear collided with the rear of another train, the engineer of the head engine, a veteran railroader, was killed. Other crew members, suffering a few slight burns and bruises, uncoupled the rear half of the train, which was pulled away by the engine at the rear, saving 22 out of 41 loads of gasoline.

### Try End-to-End Communication in 90-Mile Run in France

A 90-mile test run, featuring end-to-end radio communication, was made recently somewhere in France, by an operating battalion of the Military Railway Service, and "encouraging results" now have been reported by the Office of Director General, M. R. S. Two former railroaders—S/Sgt. Ray Welker, of Portland, Ore., who had been employed by the Southern Pacific, and T/4 Charles H. Sample, Jr., ex-Pennsylvania employee from Altoona, Pa.—are credited with being instigators of the first such test ever attempted on a train hauling war freight in an overseas theater of operations.

"We reasoned that if end-to-end communication has proven so highly valuable in the States, it ought to help us out a lot over here, too," the soldier railroaders explained, adding that "in setting up our system we had to differ from commercial operations so that communication could be accomplished without any type of permanent installation on rolling stock, and the expense had to be practically zero."

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This they accomplished by the use of radio. Two 4-lb. "walkie-talkie" sets were borrowed from the C. B. S. Signal Section, and installed on the front and rear end of the train. Sergeant Welker rode in the cab during the run, and Sergeant Sample acted as flagman at the opposite end.

"We made a 90-mile round-trip and were in perfect communication all the time, except for a few moments while passing through a tunnel," they reported. "At one station where we had to make a layover, we tried out the possibilities of radio for yard operations. It was found to be of great value in a switching yard, since car numbers could be given directly to the operator as they were read off, eliminating the written tabulations and delay in carrying them from the yard to the operator." Now the yard men favor quick adoption of the plan, they said.

### Ayres Sees Competition Revival Following German Collapse

Predicting a return to genuine business competition following defeat of Germany, Brig. Gen. Leonard P. Ayres, in an article in the current "Tracks", employee magazine of the Chesapeake & Ohio Line, forecast first, sharply reduced governmental spending, with the number of employees available for jobs markedly increasing as munitions workers and servicemen are released.

Statistics of business failures, showing that commercial and industrial insolvencies have almost disappeared is "something new in our business history," General Ayres noted, observing that this was convincing proof "that genuine business competition has been almost non-existent in 1944."

"Railroad transportation, communication, and the public utilities are among the large subdivisions of business which will probably be little effected by the return of competition." General Ayres explained that there are few newcomers to these fields of specialized forms of services. "They will be primarily affected by changes in the general level of business activity, and only secondarily by changes in the degree of competition." he said. There are exceptions to this generalization in the field of transportation, the General added, noting "the return of competition is likely to be important for the trucking companies."

### Anti-Convention Drive Extended

In view of the "continuing heavy burden on the country's transportattion system," organizations planning to hold conventions or similar gatherings before April 1, 1945, have been asked to cancel such meetings, the Office of Defense Transportation indicated October 27 in a statement disclosing the sending of a letter to that effect to such organizations by E. J. Connors, assistant director in charge of rail transport. In this connection the writer quoted with approbation a recent War Production Board statement to the same effect, in which it was pointed out that "it has been forcibly demonstrated that the converging of large numbers of convention delegates upon a city causes a concentrated strain upon transportation and hotel accommodations that cannot be justified in war time."

### Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since October 19, and which are of interest to railways:

Asphalt—Because the supply of asphalt is now sufficient to meet all demands, and transportation and storage facilities are adequate, P. A. W.'s Directive 66, which specifies the type of asphalt that may be manufactured, has been revoked.

Copper—Restrictions have been removed on the use of copper and copper base alloy in the manufacture of supply and return water lines for radiators for passenger carriers having a seating capacity of not less than eleven persona; plating of lighting fixtures; solder bushings for plumbing installations; door knockers, checks, pulls and stops for passenger transportation equipment, for repair and replacement purposes.

Cordage-Over-all third-quarter production of

cordage was slightly behind schedule, largely as a result of continued manpower shortages. Sisal rope production reached 93 per cent, and manila attained 80 per cent, of third-quarter quotas. The production of centers for wire rope continues to be a serious problèm, as the requirements in certain sizes are greater than the production capacity. No possibility of increasing the supply of hard fiber in 1945 is seen unless stantial amounts again are made available from the Philippines and the Far East.

Furnaces—L-22 has been amended to remove the provision that required that each manufacturer produce furnaces only in the fuel types he manufactured during the three-year period ending April 11, 1942. The amended order also eliminates the restriction limiting casings for furnaces of less than 250,000 BTU to 26 gage and lighter steel.

Hardware—Brass plating may now be used on cabinet locks, padlocks and builders' finishing hardware with the exception of door hangers, tracks and related items, according to an amendment to Schedule I of L-236. Nickel, chrome and cadmium plating are still prohibited, hoever.

Incandescent Lighting Fixtures—Order L-212, which controlled the manufacture and distribution of incandescent lighting fixtures, has been revoked but, production still will be limited by allotments of controlled materials, and by availability of labor, shipping cartons, and components, such as sockets, copper wire, and glass. It is estimated that an increase in production of not more than 20 per cent over the present rate will result.

Lubrication Equipment—Production of lubrication equipment is now enough to meet essential military and civilian demand, and distributors and jobbers no longer need a preference rating to obtain.

Machine Tools—Further "tightening" of the rating policy on machine tools is evidenced by an amendment to Order E-1-b, effective October 19, which provides that ratings for machine tools costing more than \$500 will be assigned only if the tools are required for military purposes, or are needed urgently for purposes related to the war effort. This clarification gives effect to W. P. B.'s recent statement that a minimum of ratings will be assigned to non-military orders for machine tools.

Tractors—Control over the sale of non-critical repair parts for track-laying tractors has been relaxed by an amendment to Order L-53-b, which no longer requires manufacturers to reserve 65 per cent of all repair parts production for the military. However, to insure filling of military requirements for critical parts, manufacturers are still required to ship up to 65 per cent of production to the armed services, if necessary to fill orders.

### Prices

Clay Tile—Manufacturers' maximum prices for structural clay hollow tile and clay drain tile produced in eight southern states, (Virginia, North and South Carolina, Tennessee, Georgia, Florida. Alabama and Misaissippi) have been increased 59 cents a ton above prices established under the regulation governing ceiling prices for most building materials, by the recent Amendment No. 57 to Order A-1 of MPR-188. Dealers are permitted to increase their maximum prices by the dollar-and-cent amount of increase resulting to them from the adjusted producers' ceilings. Any increases previously granted by O. P. A. by order to producers of the commodities located in these states are revoked by this action.

Ready-Mixed Concrete—Amendment No. 59 to Order A-1 of MPR-188, effective October 27, provides that manufacturers of ready-mixed concrete in two areas, where increases in ceiling prices were granted previously may round their adjusted prices off to the nearest 5 cents. The areas are (1) Maine, Vermont, New Hampshire, Masschusetts, Rhode Island, Connecticut, New York, New Jersey, eastern Pennsylvania, Maryland, Delaware, Washington, D. C., the city of Alexandria, Va., and five counties in northern Virginia; and (2) Michigan, Ohio, West Virginia; western Pennsylvania, a portion of eastern Kentucky, and the western tip of Virginia.

# GENERAL NEWS

### I. C. C. Procedures **Analyzed in Detail**

A Study Board report suggests certain changes but no major operations

The work of the Interstate Commerce Commission, the development of the commission's duties and powers over the 57 years of its existence, and certain proposals for reorganization of commission procedures and for institution of new separate agencies of governmental control of transportation are reviewed in the Report on Practices and Procedures of Governmental Control transmitted to Congress and the President by the now defunct Board of Investigation and Research and printed as House Document 678. The work of Talcott M. Banks, Jr., general counsel of the board, and others, this report is the only one so far printed of the 13 which the board released. in manuscript form, as the last moment of its statutory life expired September 18.

Staff Didn't Make the Proposal-While setting forth the conclusions previously expressed by the board's members, Robert E. Webb and C. E. Childe (as noted in Railway Age of May 27, page 1029, for example), that Congress should create three new and permanent transportation agencies-a "transportation authority" to undertake research, an "office of public transportation counsel" to represent the public interest, and a "transportation advisory council" to consult with and report upon the other two-the report discloses, through footnotes, that these conclusions are those of the board members, and not those of the

staff which prepared it.

As printed, the report, with its appendices, runs to 262 pages, most of which deal with the background and performance of the commission. In setting forth the conclusions derived from this study, in addition to the recommendation that additional agencies be created, the report points out that "there is need of a much more complete and widespread understanding not only of the limitations of administrative regulation but also of its requirements and distinctive character.'

In every field of regulation, it observes, "there are certain common dangers to which the administrative system is continually subject. The most serious of all is that its proper operation will be impaired or wholly defeated by the failure to secure . adequate personnel of the required abilities and standards. . . . The work of any administrative agency, or of any agency of the federal government, must of necessity be projected so that it can be performed

with the aid of a staff of no more than average abilities. . . . A danger of another sort which recurrently threatens the success of administrative regulation is that its processes will be encumbered or halted by intragovernmental conflicts, poorly conceived reorganizations, and withdrawals or divisions of authority. . . . Periodically efforts are made to deprive agencies . . . of necessary or useful powers, and proposals to this end may be no less destructive even if they are intended to improve administrative efficiency rather than to impair it. . . . A third danger . . . is found in the desire, frequently made manifest, to entrust to the regulatory bodies responsibilities that they are not adequately equipped to discharge."

Innovations Suggested-In view of assertions that have been made from time to time that the commission's procedures have been dilatory, the report deals at some length and with statistical support with the expedition with which the commission has performed its duties, reaching the conclusion that the record showed some instances of a "high standard of administra-tive efficiency," and others indicating "the possibility that material improvements might be secured." Before suggesting three "innovations" in the commission's organization, the view is stated that "administrative regulation on a national scale of such a subject as transportation is inevitably slow, laborious, and expensive. . . . It would seem that false hopes for achievement by the administrative method have been raised by its advocates, and these unwarranted expectations are used by its critics for purposes of contrast with the disappointing reality. The three "innovations" proposed are: the term of the chairman should be more than one year; the commission should set up regional offices; and it "should consider the desirability of creating" an appellate division of commissioners for the formulation of commission policy. Other recommendations deal with codification and consolidation of the Interstate Commerce Act, with expansion of the commission's research work, with its development of procedures for accelerating certain phases of its work, and with a "more precise statement" by the commission of "the major principles of regulation which have been evolved in the course of its administration."

### Missoula Yards Set Record in Cars Handled

A record for the Missoula, Mont., yards of the Northern Pacific was established in August when 70,459 cars were handled. This compares with 58,713 cars handled in August 1943 and 68,000 cars handled in September, 1944. Heavy sugar beet movements this year have contributed to the large number of cars being handled.

### 9 Mos. Net Income Was \$502,000,000

Net railway operating income for same period was \$847.884.524

Class . I railroads in September had an estimated net income, after interest and rentals, of \$55,400,000 compared with \$69,977,815 in September, 1943, according to the Bureau of Railway Economics of the Association of American Railroads. the first nine months of 1944, they had estimated net income of \$502,000,000 compared with \$697,444,084 in the corresponding period of 1943.

Declining Trend of Net Continues-The September net railway operating income, before interest and rentals, of \$89,-126,460 compared with \$110,258,969 in September, 1943, September being the sixteenth consecutive month in which the net earnings of the carriers has shown a decline. The nine-months net railway operating income was \$847,884,524 compared with \$1,082,556,139 in the same period of 1943.

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In the twelve months ended September 30, the rate of return on property investment averaged 4.10 per cent compared with 5.89 per cent for the twelve months ended

September 30, 1943.

Operating revenues for September totaled \$799,228,980 compared with \$776,487,330 in September, 1943, while operating expenses totaled \$521,264,147 compared with \$477,-986,227 in the same month of 1943. Gross in the first nine months totaled \$7,080,-522,174 compared with \$6,714,139,539 in the same period of 1943, an increase of 5.5 per cent; operating expenses amounted to \$4,662,587,502 compared with \$4,042,251,-523, an increase of 15.3 per cent.

Class I roads in the nine months paid \$1,419,213,781 in taxes compared with \$1,-445,072,858 in the same period of 1943. For September alone, the tax bill amounted to \$169,620,826, a decrease \$3,263,718 or 1.9 per cent under September, 1943. Fourteen Class I roads failed to earn interest and rentals in the nine months, of which eight were in the Eastern district, one in the Southern, and five in the Western district.

Results in the East and South-Class I roads in the Eastern district in the nine months had an estimated net income of \$217,000,000 compared with \$293,140,377 in the same period of 1943. For September alone, their estimated net income was \$21,-600,000 compared with \$28,768,881 in September, 1943.

Those same roads in the nine months had a net railway operating income of \$362,-(Continued on page 704)

### Won't Let Santa Fe Purchase Truckers

Division 4 holds road's longhaul all-truck plan not in "public interest"

Holding that sufficient evidence to sustain the statutory findings required by section 5(2) (b) of the Interstate Commerce Act—that is, that acquisition of a motor carrier by a railroad is in the public interest and will not unduly restrain competition -had not been adduced, Division 4 of the Interstate Commerce Commission, with Commissioner Porter dissenting, has denied applications of the Santa Fe Trail Transportation Co. (a wholly-owned subsidiary of the Atchison, Topeka & Santa Fe, which supported the applications) for authority to acquire certain operating rights and property of George C. Lebeck, doing business as Los Angeles-Albuquerque Express, and the Hall Motor Freight Co.

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Truckers Oppose — The applications, docketed as MC-F-2198 and MC-F-2289, respectively were opposed by a number of truckers, and the latter also was opposed conditionally by the Chicago, Rock Island & Pacific. Santa Fe proposed to purchase for \$275,000 substantially all of Lebeck's equipment and rights, covering regular-route operations aggregating 1,912 miles, extending from Los Angeles via Albuquerque, N. M., and Raton to Denver and substantially parallelling the A. T. & S. F. line between these points. Lebeck's is the only single-line truck operation between the named terminals via this route.

Hall's operations extend from Denver via Pueblo, Colo., and Wichita, Kan., to Kansas City, Mo., and Santa Fe proposed to acquire, in general, the segment between Pueblo and Wichita, with certain equipment, for \$121,906. Most of these operations are on routes generally parallel to the A. T. & S. F. At least three other truckers operate between Denver and Kansas City via the Wichita-Pueblo route, serving all intermediate points, the report indicated. Certain sections of both Lebeck's and Hall's routes, aggregating 662 miles are presently served by the Santa Fe Trail Transportation Co., which now operates 6,150 miles of truck routes and thus would acquire, without allowance for duplications, 2,500 miles more.

Spear Case Cited—The division had four possible courses open to it, according to the report: it could (1) authorize Santa Fe to render the same all-truck service as Hall and Lebeck performed; (2) approve the applications, but limit Santa Fe solely to service as an adjunct of the railroad, handling only the railroad's freight, and neither serving the public directly nor interchanging freight with other truckers; (3) apply the key point limitations, so breaking up the hauls Santa Fe would be permitted to make; or (4) deny the applications as not consistent with the public interest and unduly in restraint of competition.

In a proposed report (noted in Railway

Age of March 4, page 474) Examiner Frank A. Clifford had recommended approval of the applications, subject to a so-called key point condition, setting up 15 such points between and through which truck service would not be permitted, and thus preventing Santa Fe from operating long-haul all-truck service. This condition as detailed by the examiner was opposed by the applicant on the ground that it would defeat the principal purpose of the transactions, that is, discontinuance of "impractical and uneconomical" l.c.l. rail operations. The division majority, Com-missioners Mahaffie and Miller, agreed with this view, saying that approval of the applications either with the key point restriction or with that and additional or supplementary restrictions would make the operations "economically impracticable and of no material benefit to the railroad" or its motor subsidiary, "and would deprive the shipping public of the kind of service it is now receiving from Lebeck and Hall.'

Having found alternatives (2) and (3) unacceptable for these reasons, the division majority examined possibility (1), noting that Santa Fe was "interested in making money out of a truck line from a purely operating standpoint, regardless of the rail co-ordination," and that it proposed to render an all-truck service, unrelated to rail service, extending over the territory from Kansas City to Los Angeles, and came to the conclusion that such operations would be objectionable as in competition with the railroad's service between the same large points, and would give the railroad control of the only single-line service over Lebeck's route, serving all points. To authorize Santa Fe to render an all-truck service, "unrelated to the railroad's service," approximately half way across the country, it held, would be contrary to the "sound" precedent established in the socalled Spears case (39 M.C.C. 59) and questionable under the mandate of the National Transportation Policy with respect to preserving the inherent advantages of each mode of transportation.

Dissenting from the majority decision, Commissioner Porter favored approval of the applications "with reasonable and proper key point restrictions attached."

### Diesel Locomotive Dynamic Brake—a Correction

In the article descriptive of the Electro-Motive dynamic brake which appeared in the September 9 issue of the Railway Age there is a misstatement relative to the operation of the brake. The second paragraph under the subhead "Warning Light Indicator" on page 401 should read: "A warning light, mounted at eye level, when illuminated, indicates that the maximum armature current is being exceeded. When this occurs it is necessary to reduce excitation in the fields in traction motors to reduce armature current to avoid burning the grids. If necessary to reduce speed further, one will be required to apply the automatic brake on the train, holding the brake on Diesel units released with the independent brake valve. If the brake is used on the Diesel units when the dynamic brake is being used, there is serious danger of immediately sliding wheels."

# Justice Dept. Seen Destroying I. C. C.

Elmer Smith charges Biddle's clique with ill will and wanton ignorance

The independence of the Interstate Commerce Commission is threatened with destruction through indirect, but "insidious and subtle," efforts to make it, in effect, a subordinate of the executive department of the federal government, and specifically of the Department of Justice, the Association of Interstate Commerce Commission Practitioners was told October 27, when its special meeting at Washington, D. C., was addressed by Elmer A. Smith, senior general attorney of the Illinois Central.

The Technique of Sabotage—First, the speaker observed, the Department of Justice "seeks to substitute its own opinion as to how the Interstate Commerce Act should be construed and applied for that of the commission." In other words, the department "is attempting to control the administrative discretion of the commission on the facts in a particular case, a discretion vested by Congress in the commission and not in the department."

Second, he continued, the department, as its policies have been set forth by Attorney General Biddle and his assistant, Wendell Berge, would in the making of rates substitute "uncontrolled competition and competition alone" for the declaration of policy expressed in the Transportation Act of 1940, the standards for the determination of lawful rates found in the Interstate Commerce Act, and the principles evolved by the commission in the 57 years of its experience. And third, the department, if its policy becomes effective, "will control the relationship between carriers and shippers, and will determine to what extent and under what circumstances carriers and shippers will be permitted to discuss their common problems, and to work out an adjustment of rates which will be responsive to the needs of trade and commerce.

The department's attitude toward the commission and toward the rate-making practices of the transportation industry, Mr. Smith asserted, "is a compound of obsession, of wanton ignorance, and of ill will toward the commission," as shown by speeches and by testimony before congressional committees by the Attorney General and responsible members of the department's staff, as well as by recent appearances before the courts in which it has "confessed error on the part of the commission, and argued that the orders of the commission were invalid."

Irresponsibility — The department's "obsession" is to make its "panacea for all the problems of rate-making," that is "unfettered competition," the standard controlling the determination of lawful rates, in place of the national transportation policy and the statutory provisions under which the I.C.C. functions, he said. Its "wanton ignorance" is shown, the speaker proceeded

### The History Behind the Anti-Trust Suit

"The close of the Civil War inaugurated a period of feverish railroad construction mainly in western territory, and also a period of literally cut-throat rate wars. The railroads in sheer self-defense tried to control these by pooling, and by the mid-dle eighties had partially succeeded in the South under the leadership of Albert Fink. Finally, the Eastern trunk line rate war, the last of the major struggles, was terminated in 1885 and some semblance of order was established. The Interstate Commerce Law in 1887 prohibited pooling except with its permission and the pools that were in existence disappeared. The railroads attempted to find a substitute in various Associations (regional) and these managed to hold the situation together after a fashion. In 1896, however, the Supreme Court found the Trans-Missouri Freight Association in violation of the

anti-trust acts and that stopped that road.

'The turn of the century brought a concentrated effort by railroad managements in the East to get the situation under control, partly by purchase of railroads by the larger systems and partly by gentlemen's agreements in which the Pennsylvania Railroad and the Vanderbilt systems played a leading part. But in 1901 broke out the Hill-Harriman contest for the Burlington road and three years later the condemnation of the Northern Securities Corporation, formation of which had set-tled that contest. Meantime the I. C. C. law had been strengthened by the anti-rebates provision and as these had largely been squeezed out by railroads' joint action they disappeared from the scene. In 1910 the Commission was given complete power over railroad rates and finally at the close of World War I the comprehensive Transportation Act of 1920 brought under Commission control practically all railroad activitiesconstruction, abandonment, security issues, mergers, etc., and laid down the principles of rate regulation. In later years further tightening up of controls was effected.

"The result of all this was to leave to railroad management, that is, to boards of directors, not a single right of independent action on any matter of real importance. Directors have none such right today, nor have operating officials any real control over most of the factors determining costs of operation. Wages for example, the major element of all costs, are virtually beyond

-Thomas F. Woodlock in the Wall Street Journal

not only their control but also that of the Commission and are practically in the zone of politics, and it is these managements, these officials and directors, the Department of Justice is about to indict as violators of the anti-trust laws, by conspiring to discriminate between regions, to stifle motor, air and water transportation, and indulge in private ratemaking.

"On its face this proceeding has about as much plausibility as would have a charge against an armless man of assault and battery committed on a policeman. But there is more to the matter than this. The Department proposes to assert a principle of rate making which is wholly foreign to the principles on which the law is founded, and is incompatible with the whole theory of private ownership and operation of our railroads. It is important that this should be understood by the public.

"The law's theory is that rail carriers are entitled to charge rates for services which will give them a fair return on their property and are free from discrimination. They can be prevented from charging more but cannot be compelled to charge less than 'compensatory' rates. They may in the judgment of their managers experiment by charging rates which are less than compensatory in the expectation that they will develop traffic in such volume as will produce satisfactory profit in time. But they cannot under the law be required to do this. It is the prerogative of management. Now the Department's charge of 'regional discrimination' is tantamount to the assertion that the carriers in the South and West have not established development rates in those regions and that they should be compelled to do so in order to build up those regions. is nothing in the law which requires them to do this. Upon what legal provision does the Department suppose itself to he acting?

"Nor is this all. The main reason for retaining a system of private ownership and operation under regulation is reliance upon private managerial judgment and initiative in this particular matter, as likely to give the best results for all. What the Départment proposes would remove this last vestige of managerial freedom and any reason for continuing the empty form of private operation. The next step logically would be government operation and, presumably, government ownership."

to explain, in its representatives' failure to distinguish between the problems of an industry functioning under close government regulation and an ordinary, unregulated business enterprise, and in their lack of concern about the development, co-ordination and preservation of an adequate national transportation system. Its "ill will" is shown, he added, because its spokesmen "by insinuation and innuendo" have endeavored "to discredit and disparage the commission, and to suggest that regulation by the commission has been ineffective and has failed to protect the public interest."

The anti-trust suits recently instituted against the western railroads and various organizations by the Department of Justice at Lincoln, Neb., and against various railroads by the state of Georgia in the Supreme Court of the United States, Mr. Smith went on to say, "constitute an announcement to the public that the Interstate Commerce Act has failed in its high purpose, that the administration of the act by the commission has been ineffective and has not protected the public interest." Georgia suit, he added, "was brought not only with the blessing of the Department of Justice but with its encouragement and assistance.'

A Substitute for Regulation-"And what is to protect the public interest?" the assembled practitioners were asked. "What

is to fill this gap left by the alleged failure of regulation to protect the public interest? What is to insure just and reasonable rates, rates that will be free from unjust discrimination, undue prejudice and preference, and rates that will be sufficient to maintain an adequate and an efficient transportation service? It is uncontrolled competition, and competition alone, brought about by the enforcement by the department of the Sherman Anti-Trust Act," if the department's view prevails.

Reviewing in some detail statements made before congressional committees and in other forums by Department of Justice spokesmen, Mr. Smith referred to comments by Thurman Arnold, former assistant attorney general, who, he declared, still "dominates and controls the policies of the Anti-Trust Division of the department. He is the Anti-Trust Division." In such statements and speeches, the speaker continued, there were many assertions that were "not only meaningless but misleading" when examined in the light of the facts, and he quoted testimony of the late Commissioner Eastman in support of his

Customers Will Decide-Concluding, Mr. Smith referred to Commissioner Aitchison's Portland, Ore., address (reported in Railway Age of April 29, page 820) for a description of what he termed "a clash

between the theory of laissez-faire, which the department strangely enough would apply to common carriers, and the theory of regulation." A choice must be made, he argued, and that choice will be made, not by the Department of Justice, nor by the courts in the anti-trust cases brought by the department or with its encouragement. "The choice will be made by those who are interested in the transportation industry and those who use the transportation services provided by that industry.'

Mr. Smith was felicitously introduced by R. V. Fletcher, vice-president of the Association of American Railroads. practitioners' dinner meeting, at which eight I. C. C. members and other distinguished guests were present, followed morning and afternoon sessions devoted in part to discussions of bills before Congress which would affect the eligibility qualifications of practitioners and restrict the commission's control of such qualifications. All the sessions were presided over by Warren H. Wagner, the retiring president of the association.

During the day meetings, among other routine business, new officers were chosen; in addition to the selection of vice-presidents, the secretary and treasurer, Charles Donley and Charles E. Bell, respectively, were re-elected, while William W. Collin, Ir., of Pittsburgh, Pa., was named presi-

dent for the coming year.

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## Sessions, November 14-17

The 35th annual meeting of the National Industrial Traffic League will be held at Hotel Pennsylvania, New York, with the executive committee in session November 14 and 15, and the general membership group, November 16 and 17.

Strictly "work meetings," the annual dinner has been eliminated, and the program will be limited to discussions of transportation problems vital to the war effort. The special committee on transportation policy, headed by Charles W. Braden, general traffic manager, National Distillers Products Corp., New York, will submit that group's report and recommendations on post-war transportation.

A tentative agenda of the meetings has been announced, with reports to be heard from the committees on Aeronautics, bill of lading, car demurrage and storage, classification, export and import traffic, express, highway transportation, legislative and transportation instrumentalities and car service. Of outstanding importance, it is said, will be the report of the emergency transportation committee, under the chairmanship of W. H. Day, manager of the transportation bureau of the Boston Chamber of Commerce.

### Collision Entering C. T. C. Line Due to Inadequate Signal

What was termed "an inadequate centralized traffic control installation" in the report of the investigation of the Interstate Commerce Commission was found to have caused a rear-end collision on the Central of Georgia at Macon Junction, Ga., August 31, which resulted in the death of one employee and the injury of 34 passengers, one person carried under contract, and 5 employees. The investigation was conducted under the supervision of Chairman Patterson.

At Macon Junction the road's Albany district and Atlanta district converge, while a lead track branches off from the Atlanta listrict single-track main line to reach the Macon passenger station. Passenger trains from the Albany district enter the Atlanta district line at the junction, clear the passenger lead switch, then back into the station. Freight trains moving from the Macon classification yard to the Atlanta district also enter the main track at Macon Junction. Movements at the junction are controlled at an interlocking tower, while trains n the Atlanta line are operated by signal indications.

The trains involved in the accident were No. 41, a 44-car freight moving from the classification yard through the junction into the Atlanta district main track, and No. 32, a 20-car passenger train moving from the Albany district into the Atlanta district main track preparatory to backing nto the passenger station lead. The collision occurred at a point 892 ft. beyond the station lead switch, the rear of the tanding freight being struck by No. 32 while moving about 20 m.p.h.

No Flag Protection-The freight had occeeded from the yard lead switch into

N.I.T. League to Meet in "Work" the Atlanta main line, and had stopped, about 18 minutes before the collision, at signal 1931, displaying a stop aspect. Signal 1931, which was 3,150 ft. beyond the station lead switch, was of the semi-automatic type, and was beyond interlocking limits. A Diesel-electric yard locomotive, coupled to the rear of No. 41 as a helper, was displaying a white light to the rear, but no flag protection was provided for the train, although there was an ample supply of fusees and torpedoes on the yard engine, and although flag protection, the report said, was required under the rules. It was explained that it had been the practice for some years to allow Atlanta-bound trains to occupy the main track at this point without flag protection when three white lights were displayed at the Macon Junction interlocking tower, these lights being displayed to inform the helper engine crew to return to the junction from a specified point further along the line.

The accident occurred on an ascending grade on a 4 deg. 32 min. curve to the left at 6:35 a.m., at which time it was dark and foggy. The authorized speed through the interlocking was 15 m.p.h., while from that point to Atlanta it was, for passenger trains, 60 m.p.h.

Signal Lay-out-Approaching the point of the accident from the east, No. 32 passed, in order, an interlocking signal (displaying proceed-at-slow-speed-prepared-to-stop), a switch by which it entered the Atlanta district main line, and then, at points 2,113 ft. and 1,244 ft., respectively, east of the point of collision, two interlocking signals, each displaying proceed-at-slow-speed-preparedto-stop. The latter signal, designated as No. 4-5, was of the two-arm, upper-quadrant semaphore type. The upper unit was con-

### All Railroads Cited for Safety







IN recognition of the remarkable safety achieved by the railroads as a whole under adverse wartime conditions the American Museum of Safety and the Harriman brothers (W. Averell and E. Roland) did not this year content themselves with the usual "Harriman awards" to the individual railroads with the best safety records-but also bestowed "certificates of special commendation" upon the entire railroad industry (see Railway Age, July 1, page 50)

Within the past couple of weeks, these certificates have been formally presented to the heads of the three regional associations of railway executives, as representatives of the individual railroads which compose these associations. The accompanying photographs portray these three presentations.

In the top picture, E. Roland Harriman bestows one of the citations upon Gustav Metzman, president of the New York Central and chairman of the Eastern Railroad Presidents' Conference.

C. E. Johnston, chairman of the Western Association of Railway Executives, in the middle photograph, receives the certificate of award at the hands of Samuel O. Dunn, senior member of the awards committee-(chairman of the Simmons-Boardman Publishing Corporation and editor, Railway Age).

In the third photograph, Howard Coonley, also a member of the awards committee (formerly president of the National Association of Manufacturers and. now, director of conservation for the WPB), presents the citation to E. E. Norris, president of the Southern Railway and chairman of the Southeastern Presidents'

nected into the Atlanta district c.t.c. system and authorized movement to signal 1931 (at which the freight had stopped). The lower unit of signal 4-5 was not controlled by a track circuit, but its operating lever was provided with an electric lock, operative in normal position, and its control extended about 2,000 ft. beyond signal 1931.

Operations in the territory involved were by signal indication, and the rules provided that trains moving under a slow-speed indication, as was No. 32, should be prepared to stop, but slow speed was not defined by rule or special instruction. It was necessary for this train to proceed about 800 ft. beyond the point of collision in order for its rear to clear the switch to the station lead, so the back-up movement could be started.

Dual-Purpose Signal-After the freight had passed signal 4-5, which had displayed slow-speed-prepared-to-stop for it also, the leverman should have returned the signal to normal position, as required by the rules, the commission's report explained, but "in accordance with past practice, he permitted it to continue to display the same indication for the passenger train. This signal was so arranged that if he had returned it to stop position after the preceding train passed it, he would have been unable to change the indication as long as the track between that signal and signal 1931 was occupied. Signal 4-5 was used both as an interlocking signal and as the signal governing entrance to centralized-traffic-control territory," although the commission's c.t.c. rules require "that signals shall be automatically controlled by continuous track circuits on main tracks. . . . The lower arm of signal 4-5 was not provided with track-circuit control," and, therefore, the c.t.c. installation was "in violation of the commission's order.

"Under the conditions which existed at the time of this accident and the practices which were being followed at this point," the report concluded, "this signal displayed the same indication regardless of whether the track immediately beyond it was occupied. If this signal had been arranged to indicate track occupancy as required by the commission's order, a stop indication would have been displayed for No. 32, and the accident would not have occurred."

### Quiz Booklet on Air Service

The Air Express Division, Railway Express Agency, is now circulating a 20-page "Quizzical Quiz—with Answers," relating to air express service. Done up brightly in color, the test is on the "amusing side," with cartoon-type drawings to illustrate each point. It is designed as an aid to shippers, but limits itself to eight questions, since it makes no attempt to cover every situation.

"Perhaps people don't know as much about air express as they should," the booklet suggests, starting off with what might appear an entirely obvious question: "Who and what is air express?" The correct answer, to be found on the page following, gives opportunity to explain wherein lies the importance of this particular type of service.

"Suppose there is no airport?" a second question asks. "This is how it's done, day in

### 68 Years Old, Admitted to Supreme Court Bar

An agent-telegrapher for the Southern at Old Fort, N. C., George W. Sandlin, 68 years of age, has just been admitted to practice before the Supreme Court of the United States.

Agent Sandlin took up the study of law when he was 60 years of age. He attended law school six nights a week at Asheville, N. C., and wore out two automobiles in commuting to school, being admitted to the North Carolina bar in 1941.

Mr. Sandlin has been in the service of the Southern for 57 years, having begun his railroad career with the Western North Carolina R. R. at the age of 11 as a water boy at Old Fort, where he still resides. He is the oldest man in point of service on the Asheville division.

and day out: The shipment is taken by fast passenger train to the nearest airline city. There it's transferred to the airline and flown to the airline city nearest the destination point. Again it's transferred to a fast train going to the point of destination where it is delivered directly to the consignee," is the perfect answer.

Other questions and answers deal with packaging for shipment, best time to ship by air express, and a "guesstimate" on time and cost of flying a 10-lb. package 500 miles.

A brief table of rates is also included.

### Issue Proposed Reports in Car Spotting Investigation

Analyses of car spotting services performed by railroads under line-haul rates for various industries, and recommendations of findings in line with the principles governing the Interstate Commerce Commission's views as tested in the so-called Staley case, in which it was in effect upheld by the Supreme Court of the United States, have been made in five I. C. C. examiners' proposed reports in the commission's Ex Parte 104 proceedings, part II.

In the circumstances prevailing when the record was closed in the Staley case, the railroads concerned were held to have been performing services for that industry, at its Decatur, Ill., plant, in excess of those to which it was entitled under line-haul rates, and the roads were required to collect a spotting charge therefor.

Car spotting practices at three other industries located at Decatur, Ill.-Spencer Kellogg & Sons, Decatur Soya Bean Products Co., and Archer-Daniels-Midland Co.—were the subject of reports by examiners E. J. Hoy and Charles W. Berry. Services were performed for the named industry by the Wabash and Illinois Terminal, and for the other two by the Illinois Central. In these cases the examiners recommended that, with certain specified exceptions, the commission should find that the roads were under obligation to perform those services at the line-haul rates, and that they were not violating the Interstate Commerce Act by so doing.

The same examiners submitted a proposed report as to the Argo, Ill., plant of the

Corn Products Refining Co., within Chicago switching district limits. Switching was performed by the Belt Railway of Chicago, although the plant also was reached by the Alton and the Indiana Harbor Belt. In this case they recommended that the commission find that line-haul rates cover the receipt and delivery of cars at "reasonably convenient points," which were described, and that car movements beyond those points, for the industry's convenience, if performed without compensation would be in violation of the act.

Anaconda Copper Operations -- A fifth report, prepared by Examiner Leonard Way, dealt with conditions at the Black Eagle, Mont., plant of the Anaconda Copper Mining Co. and affiliated operations on the Great Northern near Great Falls. Here the examiner found that "the Great Northern has continued to perform the switching service within the plant in con nection with line-haul traffic without additional charge for nearly 50 years under the belief that it was a part of its obligations under the line-haul rates. . . . However, it seems clear . . . that the services performed in weighing, switching and spotting carload freight in this plant are in excess of the service for which carriers are compensated under the line-haul rates.

Performance of such services the examiner held to be preferential to the industry and in violation of section 6(7) of the act. The commission also should find, h suggested, that "under efficient and eco nomical management" the railroad "would not provide and maintain within the plant areas of the industry facilities and a system of private tracks and sidings for the loading and unloading and the movement of the traffic of the industry; that to do s is a device for refunding or remitting a portion of the tariff charges and an extension of privileges or facilities not authorized in the line-haul tariffs and for which no com pensation is included in the line-haul rates.

### Chicago Traffic Club to Have Armistice Day Luncheon

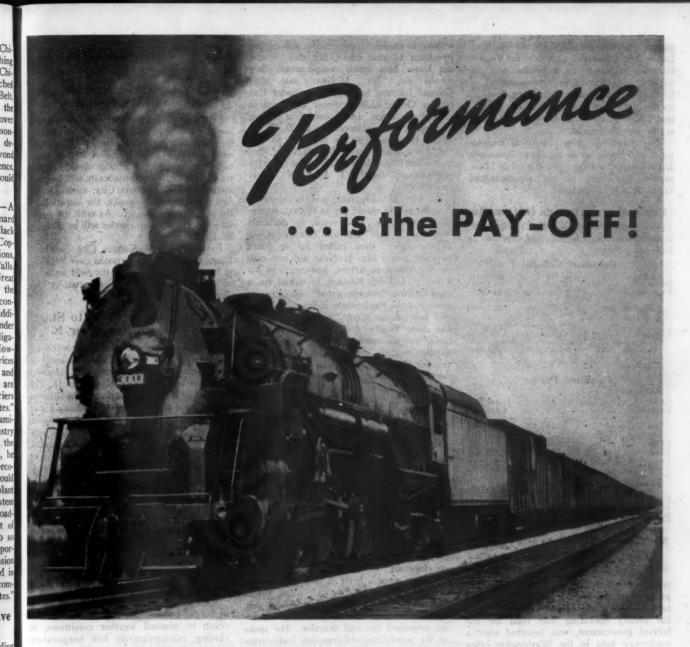
Col. George H. Cushman, commanding officer of the Sixth Service Command at Ft. Sheridan, Ill., will be the speaker at an armistice day luncheon of the Traffic Club of Chicago on November 10, his subject being Transportation Activities.

### Defer Multiple-Loading Order

By order of Commissioner Splawn, the effective date of the order of Division 2 of the Interstate Commerce Commission in its I. & S. No. 5268 proceeding, involving the application of Rule 33, the so-called multiple-loading rule, has been postponed, as requested by railroads planning to seek reconsideration of the issues. The order thus becomes effective January 12, 1945.

### Representation of Employees

In the course of investigations undertaken by the National Mediation Board at the request of the Railroad Workers' Industrial Union, District 50, United Mine Workers of America, to determine who may represent the engineers, firemen, maintenance of way employees and yardmen (foremen and helpers) of the Muskegon Railway & Navi-



No railroad can wring more miles out of a locomotive than its builder has packed into it. Lima-built locomotives give you the superior performance, the extra stamina that flow directly from Lima's insistence upon the highest standards of workmanship and materials.

The steam locomotive has set new records of performance in its speeding of war-time traffic. In the current performance of Lima-built Modern Steam Locomotives will be found countless examples of what can actually be expected from steam power at its best.

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gation, for the purposes of the Railway Labor Act, the union withdrew the dispute from investigation. In a similar way the board's investigation of representation of Chicago Great Western patrolmen, invoked by the National Council of Railway Patrolmen's Unions, A. F. of L., was withdrawn at the union's request.

The chauffeur of an electrical maintenance and repair car of the Butte, Anaconda & Pacific selected the Brotherhood of Locomotive Engineers as his representative under N.M.B. procedures.

### September Earnings in Canada

The two principal Canadian railways reported September earnings and expenses as follows:

Cam	-31-	m N	3-45	onal
Can	aqua	H T	AWE	OHAL

September Gross Expenses	1944 \$37,788,000 32,185,000	Increase \$842,000 4,664,000
Operating Net*	\$5,603,000	\$3,822,000†
6 Months Gross Expenses	\$328,148,000 266,937,000	\$1,199,000 12,106,010
Operating Net*	\$61,211,000	\$10,907,000†
4 Decrees		

### Canadian Pacific

September Gross Expenses	\$27,630,612 23,939,942	\$1,341,179 1,435,274
Net*	\$3,690,670	\$94,095†
9 Months Gross Expenses	\$237,952,981 211,331,860	\$21,933,676 28,074,416
Net*	\$26,621,121	\$6,140,740†

† Decrease.

\* Net as shown in this tabulation, for the C. N. R., is equivalent to "Net Operating Revenue" in U. S. accounting terminology, while the net shown for the C. P. R. corresponds to "Net Railway Operating Income" in U. S. terms.

### McNear Reports "Arm's Length" Conference With Johnson

No progress toward a settlement of difficulties between George P. McNear, Jr., president of the Toledo, Peoria & Western, and the Office of Defense Transportation, the agency operating that road for the federal government, was reported after a conference held in the Washington office of Col. J. Monroe Johnson, director of the O. D. T., on October 21, concerning which Mr. McNear's version has become available through a letter written by him to Colonel Johnson, copies of which were sent to President Roosevelt, the Attorney General, and the Interstate Commerce Commission.

The conference was called, according to Mr. McNear, at the suggestion of Attorney General Biddle, and one of its purposes, he indicated, was to seek an arrangement whereby payment of the salaries of certain of the road's officers, including Mr. McNear, would be authorized by O. D. T. In addition to Mr McNear and his counsel, and Colonel Johnson, it was attended by Holly Stover, federal manager of the T. P. & W., E. J. Connors, assistant director of the O. D. T., and C. M. Roddewig, O. D. T. general counsel, the letter stated.

Entitled to Compensation.—Mr. Mc-Near wrote that the O. D. T. director remarked during the discussion that the road's officers were entitled to advances on account of compensation, and that he was willing to make a recommendation to the President to that effect, but that he did not know how much compensation they should get. Mr. McNear said that Colonel Johnson had discretion under Executive Order 9320 to direct the payment of such advances. In the course of further discussion, he explained, the O. D. T. director remarked that he proposed to deal "at arm's length" with Mr. McNear, and that much litigation would develop from the controversy, but the T. P. & W. would pay the bill.

At this Mr. McNear said he observed that the courts would say as to that, whereupon the O. D. T. director, he declared, "flew into a rage" and told him to get out of the office, then called for a guard to eject him. Mr. McNear did not wait for the guard to arrive, however. In his letter to Colonel Johnson he asked for a copy of the "unexpurgated" stenographic record of the conference, if any was made, and pointed out that, "if the government has now finally decided to make payments on accounts of compensation, in a manner that is satisfactory," his application for I. C. C. authority to borrow money could be withdrawn. Following an adverse examiner's report (noted in Railway Age of July 29, page 220) and argument before Division 4, action on the application was being awaited.

### Railway Industry Not Shy of Brains, Says S. P. Agent

When the southern California chapter of the American Association of Advertising Agencies met in one-day session in Los Angeles, October 20, George B. Hanson, general passenger agent, Southern Pacific, told the group that "brains" had not left the railway industry but were, on the contrary, more active than ever in post-war development.

Giving them a brief picture of what the railways are aiming at to combat future competition, Mr. Hanson touched on fast, light rolling stock with "amazing" luxuries promised the rail traveler. He spoke of the possibilities of complete radio communication between trains and telegraph



Meriman Photo Art

S. P. Passenger Agent Hanson Tells "Ad" Group of Railways' Plans for Postwar

services, possible television sets, localized heat control and air conditioning, and radio head phone for lounge cars.

### Sunday Concerts Sponsored by Kansas City Southern

Lending support to what the railroad believes is one of Kansas City's "great assets," the Kansas City Southern Lines has arranged to sponsor a series of 20 half-hour radio concerts by the Philharmonic orchestra of that city. The broadcasts will be over station KMBC, Kansas City, each Thursday evening for 20 weeks, the duration of the philharmonic season. As with the regular concerts, the radio series will be directed by Efram Kurtz.

In addition, the Kansas City Southern Lines, on Saturday afternoons over WDAF, is sponsoring direct-from-the-field accounts of Big Six football games, reported by Hal Totten, sports commentator.

### Vacation Conferences to Start at Chicago November 15

Conferences between carriers' conference committees and non-operating unions on their demands for longer paid vacations will start at Chicago on November 15. The holding of conferences places the dispute in its second phase under the Railway Labor Act, the first having been completed when the demands served upon individual railroads were turned down. The demands, made in June, ask that an employee, after working the better part of a year, should receive a vacation of 12 working days at his customary rate of compensation; after 2 years, 15 days vacation; and after 3 years, 18 days. At present the non-ops get 6 days, except clerks and telegraphers who get 9 days after 2 years of service and 12 days after 3 years.

### Demurrage Partially Canceled on Frozen Sand

Under circumstances where sand loaded in hopper-bottom cars became frozen as a result of unusual weather conditions, including extraordinarily low temperatures which were not a considered possibility when facilities were arranged for unloading, it was unreasonable to assess demurrage charges to the extent that they exceeded \$2.20 per day in accordance with the tariff which authorizes 96 hours free time when the lading is frozen and requires heating, thawing or loosening to unload, according to a report by Division 2 of the Interstate Commerce Commission in its No. 29080 proceeding.

The case arose from a petition for reparation, after the railroads had been denied authority to waive collection of the charges, they having conceded that circumstances were such that prompt unloading was prevented. It involved some 38 cars of sand placed for unloading at Waveland, Ark, during a period of unusually cold weather prevailing from January 2 to 11, 1942, inclusive, and released in the period January 15 to 20, inclusive. Because the available facilities afforded no adequate means of thawing or loosening the sand prior to the rise in temperature on January 11, the division held, it would be unreasonable to accord no relief from charges that are in

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The Franklin System uses the available steam more efficiently than any conventional type of steam distribution — resulting in a lower steam rate per horsepower and a much higher horsepower output.

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the nature of penalties for preventable detention of cars.

The charges collected were \$2.20 for the first four days after free time, and \$5.50 per day thereafter. Because it held that the complainant had not made diligent and constant efforts to unload the cars after January 11, some of the delay in the release of equipment was attributable to him, the division found, so it concluded that entire removal of the demurrage charges was not warranted, and therefore awarded reparation, with interest, to the extent that demurrage charges in excess of \$2.20 per day were paid.

### Asks More Time to Complete Signal Installation

The Kansas City Southern has applied to the Interstate Commerce Commission for an extension of time in which to comply with the commission's amended order prescribing certain installations of signal equipment by the end of this year. As noted in Railway Age of July 15, page 132, a 6month extension was previously granted. The order was issued in connection with a standing show-cause order which would require the road to install a block system on all portions of its main line. The carrier has informed the commission that installation of a C.T.C. system on the line between DeQuincy, La., and Beaumont, Tex., about 37 miles, is expected to be completed within the time limit, but the installation of automatic block signals between Joplin, Mo., and McElhany, about 26.5 miles, has been delayed by the manufacturer's inability to deliver the equipment.

### Charge Union Deprived Negroes of Property Rights

Charges that negro porter-brakemen are being deprived of their property rights under the fifth amendment to the Constitution through a contract signed on April 27, 1944, by the Atchison, Topeka & Santa Fe and the Brotherhood of Railroad Trainmen, which union bars negroes from membership, were made in a suit filed in the federal District court at Chicago on October 31, in behalf of 23 negro porter-brakemen who were to be dismissed on November 1. The suit was entered as a class suit representing the interests of 300 men in similar positions. Defendants, 12 in number, include the National Railroad Adjustment Board, the Santa Fe and F. W. Coyle, vice-president of the Brotherhood of Railroad Trainmen. When the suit was filed the court delayed until November 21 the dismissal of the 23 negro porter-brakemen who perform switching and other duties and ordered a three-judge statutory court to hear the case.

In 1918, the suit set forth, the director general of railroads entered an order that negroes employed as firemen, trainmen and switchmen be paid at the same rates as white employees. In April, 1942, the suit added, the First division of the National Railroad Adjustment Board ruled that only union members could be employed as switchmen. Since negroes are barred from membership in the Brotherhood of Railroad Trainmen, the suit alleged, they are being

deprived of their property rights under the fifth amendment of the Constitution through a contract between the Santa Fe and the Brotherhood.

### Freight Car Loading

Loadings of revenue freight for the week ended October 28 totaled 916,446 cars, the Association of American Railroads announced on November 2. This was an increase of 10,505 cars or 1.2 per cent above the preceding week, an increase of 32,719 cars or 3.7 per cent above the corresponding week last year, and an increase of 25,886 cars or 2.9 per cent above the comparable 1942 week.

Loading of revenue freight for the week ended October 21 totaled 905,941 cars, and the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

### Revenue Freight Car Loading

Revenue	Lieffur	Car Loud	1116
For the Week	Ended Sa	turday, Octo	ber 21
District	1944	1943	1942
Eastern Allegheny Pocahontas	165,918	172,649	165,167
	194,213	192,977	186,118
	53,805	55,168	54,468
Southern	121,464	123,216	127,420
Northwestern	141,682		145,749
Central Western	150,420	141,394	146,589
Southwestern	78,439	76,496	77,751
Total Western Districts	370,541	361,409	370,089
Total All Roads	905,941	905,419	903,262
Grain and grain products Live stock Coal Coke Forest products Merchandise l.c.l. Miscellaneous	56,718	59,765	47,665
	26,561	27,750	24,362
	171,810	172,123	167,199
	14,580	15,319	13,989
	42,570	43,812	49,209
	67,046	-73,724	76,075
	108,032	105,944	92,189
	418,624	406,982	432,574
October 21	905,941	905,419	903,262
October 14	898,650	912,348	901,251
October 7	877,942	906,357	909,250
September 30	912,999	910,644	907,286
September 23	898,667	907,311	897,427

Cumulative Total,

43 Weeks . . 36,103,466 35,143,162 35,860,873

In Canada.—Carloadings for the week ended October 21 totaled 78,601 (a new high record for the war years) compared with 70,383 for the previous week and 73,795 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
Oct. 21, 1944 Oct. 14, 1944 Oct. 7, 1944 Oct. 23, 1943	78,601 70,385 78,270 73,795	39,352 37,459 37,804 39,975
Oct. 21, 1944 Oct. 23, 1943 Oct. 24, 1942	2,948,964 2,769,224	1,611,998 1,881,154 1,428,191

### Annual Meeting of Transportation Association November 9

The annual meeting of the Transportation Association of America will be held at Chicago on November 9.

### A. A. R. Annual Session at Chicago November 15

The annual meeting of member roads of the Association of American Railroads will be held on November 15 at the Blackstone Hotel, Chicago. It will be preceded on the 14th by a meeting of the A. A. R. board of directors.

### 9 Mos. Net Income Was \$502,000,000

(Continued from page 698)

409,937 compared with \$452,370,832 in the same period of 1943. Their September net railway operating income amounted to \$32,146,307 compared with \$44,606,240 in September, 1943.

Gross in the Eastern district in the nine months totaled \$3,093,138,650, an increase of 4.1 per cent compared with the same period in 1943, while operating expenses totaled \$2,154,647,125, an increase of 14 per cent.

Class I roads in the Southern region in nine months had an estimated net income of \$79,000,000 compared with \$108,103,884 in the same period of 1943. For September, they had an estimated net income of \$6,300,000 compared with \$9,623,325 in September, 1943.

Those same roads in the nine months had a net railway operating income of \$126,-858,400 compared with \$157,022,364 in the same period of 1943. Their September net railway operating income amounted to \$12,031,822 compared with \$15,341,282 in September, 1943.

The nine-months gross in the Southern region totaled \$1,002,505,094, an increase of 3.6 per cent compared with the same period of 1943, while operating expenses totaled \$623,275,950, or an increase of 13.8 per cent.

Outcome in the West—Class I roads in the Western district in the nine months had an estimated net income of \$206,000,000 compared with \$296,199,823 in the same period of 1943. For September, they had an estimated net income of \$27,500,000 compared with \$31,585,609 in September, 1943.

Those same roads in the nine months had a net railway operating income of \$358,616,187 compared with \$473,162,943 in the same period of 1943. Their September net railway operating income amounted to \$44,948,331 compared with \$50,311,447 in September, 1943.

Gross in the Western district in the nine months totaled \$2,984,878,420, an increase of 7.6 per cent compared with the same period in 1943, while operating expenses totaled \$1,884,664,427, an increase of 17.4 per cent.

### CLASS I RAILROADS—UNITED STATES

Month	of September	
Total manufacture	1944	1943
Total operating revenues	\$799,228,980	\$776,487,330
Operating ratio—	521,264,147	477,986,227
per cent	65.22	61.56
Net railway oper- ating income (Earnings before	169,620,826	172,884,544
Net income, after	89,126,460	110,258,969
charges (estimated)	55,400,000	69,977,815

Nine Months En	ded September	30, 1944
revenues \$	7,080,522,174	\$6,714,139,539
Total operating expenses	4,662,587,502	4,042,251,523
Operating ratio-		
Taxes	65.85	1,445,072,858
Net railway oper- ating income	AMA	Mark State
(Earnings before		TO MA
Net income, after	847,884,524	1,082,556,139
charges (estimated)	502,000,000	697,444,084

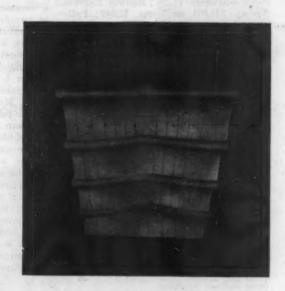


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### Retirement Board Figures Still Understate Wages

The U. S. Railroad Retirement Board continues to disagree with the Interstate Commerce Commission regarding the number of railroad employees and what they are paid. According to the Commission, the average number of employees of Class I railroads (excluding switching and terminal companies) in 1942 was 1,271,077 and their average compensation was \$2,307. According to statistics recently issued by the Railroad Retirement Board, the number of employees of the Class I roads in 1942 was 2,108,304 and their average compensation was \$1,348.

The reason for the fantastic discrepancies in these figures is the fantastic method the Retirement Board continues to use in making its computations. It includes in its "total employees" every person who worked for the railroads as much as a month. Having found that 2,108,304 persons worked for the Class I roads a month or more, it divides this figure into the total payroll, and thus arrives at its figure of "average compensation" of \$1,348, which is 42 per cent less than the Commission's figure. The same method, which serves the socialistic purpose of indicating that employees are paid much less than they are, is used in computing "average compensation" of each class of employees.

The tabulation covers 2,468,933 persons who were employed from 1 to 12 months during 1942 by the railroads and affiliated agencies. Of the total, only 1,153,931 persons or 46.7 per cent worked 12 months, while 820,696, or 33.3 per cent worked 4 months or less. The figure given for number of employees and average pay include: Class I switching and terminal companies, 70,938 employees, \$1,297; Railway Express Agency, 111,091 employees, \$1,049; Pullman Company, 37,025 employees, \$1,215; Class II and Class III railroads, 29,844 employees, \$1,038; other than Class I switching and terminal companies, 40,704 employees, \$1,071; electric railways, 25,310 employees, \$1,160; car loan companies, 17,122 employees, \$967.

A break-down of the statistics of Class I railroads by occupational groups shows the

following:		
	No. of	Average
		Compensation per employee
Executives, supervisors and		
professionals	85,765	\$2,898
Station agents and teleg-		
raphers	53,189	2,040
Clerks and junior of-		
fice employees		1,598
Engineers and conductors		3,001
Firemen, brakemen, switch-		
men and hostlers		2,070
Gang foremen		2,121
Skilled way and structures		
employees		1,637
Skilled shop employees		2,264
Helpers and apprentices		1,242
Extra gang laborers		301
Other way and structures		
laborers	303,565	565
Shop and stores laborers		678
Station, platform and yard		
laborers	146,642	602
All other employees (ex-	8	A DWEE
pations)		859

A total of 304,648 male negro employees were on the payrolls in 1942 and received an average compensation of \$588. Of the total, 98,681 or 32.4 per cent worked 12 months, while 152,651 or 50 per cent worked 5 months or less. Of the male

negro employees, 254,331 worked on Class I railroads and received an average of \$671.

A total of 98,224 female white employees were on the payrolls in 1942 and received an average of \$897. Of these 77,013 were employed by Class I railroads and the average compensation was \$927. Of the 98,224 female white employees, 38.6 per cent worked 12 months in 1942 and 47.5 per cent worked 5 months or less.

### September Truck Traffic

Motor carriers reporting to the American Trucking Associations, Inc., transported in September 2,322,662 tons of freight, a decrease of 0.8 per cent below the 2,340,473 tons reported for August and of one per cent below the September, 1943, figure of 2,347,699 tons. The A.T.A. index, based on the 1938-1940 average monthly tonnage of reporting carriers, was 182.5 for September, as compared to 187.4 in August.

The foregoing figures, according to the A.T.A. announcement, are based on reports from 293 carriers in 47 states and the District of Columbia. Truckers in the Eastern district reported tonnage decreases of 2.7 per cent below August, and 3.8 per cent below September, 1943. In the Southern region there was a 0.8 per cent decline from August and a 7.2 per cent decrease below September, 1943. Increases were reported by the Western district, on the other hand, the gain being 4.0 per cent over August and 9.4 per cent over September, 1943.

### 1944 A. S. M. E. Medal to Go to Edward G. Budd

Edward G. Budd, president of the Budd Manufacturing Company, Philadelphia, Pa., "because of his outstanding engineering achievements," is one of nine 1944 recipients of awards and honors to be conferred by the American Society of Mechanical Engineers, in ceremonies at the coming annual meeting, to be held at Hotel Pennsylvania, New York, November 27 to December 1.

In making known the awards on November 2, Mechanical Engineering, the A. S. M. E. publication, noting that Mr. Budd had been awarded the A. S. M. E. Medal, said of him, in part:

"He was a pioneer in the development of the welded all-steel automobile body and the steel-disk automobile wheel. He also pioneered development of the 'shot-welding' process which made practical the use of stainless steel in structures, such as railroad passenger-train cars, bus and truck bodies and airplanes. He was the leader in the construction of streamlined lightweight railroad passenger trains with their many innovations."

### Club Meetings

The Central Railway Club of Buffalo will meet at 8:00 p.m., November 9, in Hotel Statler. Speakers will be F. K. Mitchell, assistant general superintendent motive power and rolling stock, New York Central, New York, who will discuss "Maintenance of Equipment Strategy"; R. H. Ulbrich, district inspector of locomotives, Interstate Commerce Commission, Buffalo, whose topic will be "Saving Time"; and F. B.

Smith, manager of service, railroad division, Worthington Pump & Machinery Corp., Harrison, N. J., who will talk on "Effects of Feedwater Heater on a Locomotive." In addition, there will be a movie, entitled "Custom Built Power," presented by the H. K., Porter Company, Inc., Pittsburgh, Pa.

The Northwest Locomotive Association will next meet at 8:00 p.m., November 20, in Woodruff Hall, Prior and St. Anthony Avenues, St. Paul, Minn. There will be an address by J. E. Bjorkholm, superintendent motive power, Chicago, Milwaukee, St. Paul & Pacific.

### August Air-Mail Shipments Rise 10.9 Per Cent

A total of 37,293 shipments were carried in combination air-rail express service in August, a 10.9 per cent increase over the same month a year ago, the Air Express Division, Railway Express Agency, has reported. There was an increase of 11.3 per cent in revenue over the comparable 1943 period, it was stated further.

### Express Agency Aids O. D. T.'s Early Xmas Shipping Plan

The holiday shipper will contribute something to the war effort if he will send all personal Christmas packages to destinations within the United States by December 1, L. O. Head, president of the Railway Express Agency recently announced, adding that the 60,000 employees of his organization would participate actively in the O. D. T. appeal for early mailing.

### Construction

ILLINOIS CENTRAL.—This road and its lessor, the Chicago, St. Louis & New Orleans, have applied to the Interstate Commerce Commission for authority to construct a 1.18-mile extension of the former's line in Hopkins County, Ky. The extension, serving mines of the West Kentucky Coal Company, would connect with the C, St. L. & N. O. line at a point about 3 miles southwest of Madisonville, Ky.

MISSOURI PACIFIC.—This road has applied to the Interstate Commerce Commission for authority to construct a 4.93-mile branch from a point near Johnston City, Ill., to reach coal mines in the vicinity of West Frankfort, but not passing through any city or town,

NORTHERN PACIFIC.—This company has applied to the Interstate Commerce Commission for authority to construct a new single-track main line from New Salem, N. D., to Kurtz, 16.5 miles, to replace the existing 25.8-mile line between these points.

SOUTHERN PACIFIC.—This road has been authorized by Division 4 of the Interstate Commerce Commission to build a 2.9-mile line from Yuba City, Calif., to Berg, thus developing a new connection of its Knights Landing branch with its main line. The \$132,295 project, to be financed with treasury funds, is to be completed by June 1, 1945.

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The heat in exhaust steam can be put to useful work if reclaimed and returned to the boiler. An increase in boiler capacity directly proportional to the amount of heat returned, is the result.

A satisfactory means of reclaiming a portion of this waste heat in exhaust steam is through the medium of the Elesco exhaust steam injector.

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### Equipment and Supplies

### FREIGHT CARS

THE NEW YORK CENTRAL has issued inquiries for 1,000 steel high-side gondola cars of 70 tons' capacity for the Pittsburgh & Lake Erie. Bids are due on November 16.

THE MISSOURI PACIFIC has ordered 1,000 box cars of 50 tons capacity from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of September 16.

### SIGNALING

THE ATCHISON, TOPEKA & SANTA FE has awarded a contract to the Union Switch & Signal Co. for materials involved in the construction of centralized traffic control between Algoa, Tex., and Houston, protecting reverse running on 7 mi, of double track, with crossovers located at the points required to run certain trains around each other while traveling in the same direction, and on 19 mi. of single track with three sidings. The C. T. C. machine, located at Alvin Tower, will control the new model M-22A dual control low-voltage electric switch machines and style H-5 search light signals, with the order also including DN-11 relays, housings, type T-21 hand-throw switch movements with SL-21 electric locks, U-5 switch circuit controllers, etc. The construction work will be done by the railway's installation forces.

THE CHICAGO, ROCK ISLAND & PACIFIC is prepared to begin work on 158 mi. of centralized traffic control upon receipt of" materials which have been allocated by the War Production Board. The installations will be made on 127 mi. of line between Caldwell, Kan., and Herington and on 31 mi. between Ft. Worth, Tex., and Dallas. It is estimated that the installation between Caldwell and Herington will save 37,244 car-days and 1,387 engine-days annually and thereby conserve equipment for war and post-war transportation needs. Between Ft. Worth and Dallas, the installation will increase the capacity of the single track to about 75 per cent of the capacity of a double track and will result in a saving of 2,274 car-days and 86 engine-days. When these projects are completed, approximately 500 mi. of Rock Island lines will be equipped with centralized traffic control of which 180 mi. are in the double track territory between Chicago and Rock Island, Ill.

THE SOUTHERN PACIFIC has placed an order with the Union Switch & Signal Company for materials for the installation of centralized traffic control on the Salt Lake division between Lemay, Utah, and Bridge, a distance of 53 miles. The machine which will control this C. T. C. will be located at Ogden, Utah, 30 miles east of the beginning of the controlled territory. The eastern half of this controlled signal system will be handled by conventional d.-c. codes

and the western half by coded carrier control superimposed on the two-wire code line. In addition to the code equipment, the order includes searchlight high and dwarf signals, style M-22A dual-control switch layouts, electric locks, relays, rectifiers and housings. The field installation will be performed by the railroad forces.

### **Supply Trade**

The **DeVilbiss Company**, Toledo, Ohio, has been awarded the Army-Navy "E" for the third time for high achievement in the production of war material.

Severin Merz, controller of the St. Louis Car Company, St. Louis, Mo., has been promoted to treasurer of that company and its subsidiary, the St. Louis Aircraft Corporation, succeeding Eugene Augustine, deceased.

Robert Boyd Parker has been appointed assistant to the president of the American Brake Shoe Company. His duties include sales research and coordina-



Robert Boyd Parker

tion, and responsibility for liaison between the company's metallurgical and research laboratories and the sales and production staffs of its 59 plants. Mr. Parker was graduated from Yale University.

William S. Hogg has been appointed to the mid-western sales staff of the storage battery division of the Philco Corporation, with headquarters in Cincinnati, Ohio. Mr. Hogg will represent the Philco storage battery division in the Indianapolis, Ind., Louisville, Ky., and Cincinnati, O., area.

J. E. White, project manager in charge of construction, procurement and equipment for the new plant of the Kropp Forge Aviation Company, Chicago, has been appointed sales engineering representative in northern Illinois for the Kropp Forge Company, with headquarters in Rockford, Ill.

Establishment of a new engineering, sales and service organization to coordinate the company's expanding activities in the field of railroad radio communications has been announced by William P. Hilliard, general manager of the Bendix Radio Division of the Bendix Aviation Corporation. R. B. Edwards, who has been responsible for many Bendix developments in the radio transmitter field during his eight-year association with the company, has been appointed engineering coordinator for the new sales and engineering group, which will be under the general direction of W. L. Webb and John W. Hammond, chief engineer and sales manager, respectively, of the Radio Division.

Henrik J. Eklund has been appointed chief engineer of the D. J. Murray Manufacturing Company, Wausau, Wis. Mr. Eklund has been associated with the designing and development of paper and pulp mill machinery, both in the United States and Finland, since 1933.

Henry Barnhart, manager of the shovel and crane division of the Lima Locomotive Works, Lima, Chio, has been appointed vice-president in charge of that division. Mr. Barnhart received Ph. B. and M. A. degrees from Notre Dame University and did post-graduate work at Harvard University. He joined the sales force of the Lima organization as assistant sales manager in 1928. He was appointed general sales manager of the shovel and crane division in 1936 and manager of the division in 1943. Albert Jay Townsend, chief mechanical engineer of the Lima Locomotive Works, has been appointed vicepresident in charge of engineering. Mr. Townsend was graduated from Michigan University with a degree in mechanical engineering in 1915. He began his career with Lima as calculator in 1917. Following military service as master engineer with the American Expeditionary Force in 1918, he returned to Lima in July, 1919, and subsequently served successively as chief calculator, mechanical engineer and chief mechanical engineer.

Lyle E. Hill has been returned to the engine sales department of the Caterpillar Tractor Company, Peoria, Ill., as head of



Lyle E. Hill

the department's railroad power division. Mr. Hill has served Caterpillar as a priorities supervisor and special traveling representative of the purchasing department for the past two years. In the railroad power



# LOCOMOTIVES

# THAT ARE MAKING

HISTORY



NOTHER order for the 4-6-6-4 Alco Locomotive-two of these powerful and popular units making a total of eight built to do a big job for the Spokane, Portland and Seattle.

munup, now over me nat in approximation operation more economical and efficient locomotive operation

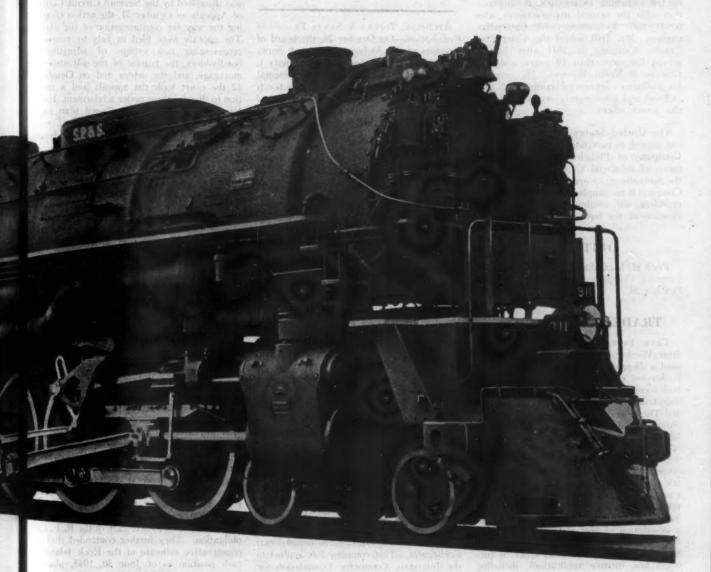
Proof that Alco-built locomotives do the job comes from the fact that orders and reorders for this type locomotive alone total 210 units.

Alco builds locomotives of any type -coal- or oil-fired steam-Diesel-electric or electric-for all modern railroading requirements.

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Weight on Drivers	×	445,500 lbs.
Weight of Engine	1	638,500 lbs.
Cylinders (Four)		23 x 32 in.
Diameter of Drivers	*21	. , 70 in.
Boiler Pressure		. 260 lbs.
Tractive Power	0.15	106,900 lbs.
Tender Capacity-Fuel (Oil)	1	6,530 gals.
Tender Capacity-Water .		25,000 gals.

Locomotive designs developed by American Locomotive Company have been, are, and will continue to be powerful factors in American railroad operating efficiency and economy.

Here days and H



Unsurpassed for the Job because Built for the Job



division, he will contact U. S. and Canadian railroads in furthering the sale of Diesel-electric switching locomotives, in conjunction with the several manufacturers who power their locomotives with Caterpillar engines. Mr. Hill joined the Caterpillar Tractor Company in 1941 after having served for more than 19 years with the Chicago & North Western. He received his machinist's apprentice training with that railroad and subsequently served as a motive power officer.

The United States Rubber Company has agreed to purchase the L. H. Gilmer Company of Philadelphia, Pa., manufacturers of industrial V-belts. No change in the management or operations of the Gilmer Company is contemplated. John S. Krauss, president, will continue in the active management of the business.

#### **OBITUARY**

Fred H. McCabe of the McCabe Manufacturing Company, Lawrence, Mass., died October 26.

#### TRADE PUBLICATIONS

TANK TYPE LOCOMOTIVES.—The Vulcan Iron Works, Wilkes-Barre, Pa., has issued a 24-page Bulletin, No. A-394, which is devoted especially to saddle- and side-tank locomotives for plantation and general industrial service. Tender-type locomotives and Diesel and gasoline locomotives, with either geared or electric drive, are also illustrated and described.

ELECTRIC FURNACES.—Bulletin HD4444 recently issued by the Hevi Duty Electric Company, Milwaukee, Wis., is an illustrated 40-page booklet covering the electric heat-treating furnaces manufactured by this company. The booklet begins with a description of heat elements and mountings and includes illustrations and descriptive data covering numerous types of furnaces and furnace applications, including car bottom furnaces used for various heattreating operations in railroad maintenance work. A feature of the bulletin is the fact that the page devoted to each type of furnace carries reference to an additional bulletin which gives needed detail information regarding the furnace size, installation and use of that particular type.

87 LOUDSPEAKERS are employed in busy King's Cross station, London, and no longer is loud-speaker equipment "merely viewed as an improved substitute for porters calling out station names," explains a recent issue of the London & North Eastern Railway Magazine. "Steps are now being taken," it is said, "to ensure that a first-rate training" is provided the announcers, and the latest innovation is that of music, "to fill the intervals between announcements." The railroad adds that "every endeavor is being made to enliven for our passengers the tedium of waiting."

Since the first use of loudspeakers in 1937, 14 L.N.E.R. stations have been fitted with this type of equipment.

#### **Financial**

ATCHISON, TOPEKA & SANTA FE.—Bond Redemption.—On October 26, the board of directors of the Atchison, Topeka & Santa Fe authorized the redemption on January 1, 1945, of the \$22,545,000 of Transcontinental Short Line first mortgage 4 per cent bonds of 1958, which are callable at 110. After redemption of this issue the Santa Fe will have only \$7,977,000 of callable debt remaining, represented by its convertible issues due in 1955 and 1960. Refunded debt will have been reduced to \$243,000,000, and fixed charges at the beginning of 1945 will amount to \$9,000,000 annually.

Baltimore & Ohio.—Adjustment Plan.— The financial adjustment plan of the B. & O., reported in detail in the Railway Age of September 23, page 495, was mailed to the affected security holders on November 1.

Baltimore & Ohio. — Asks Bids on Promissory Notes.—The B. & O. has requested bids on \$706,500, principal amount, of promissory notes, series F, subject to the approval of the Interstate Commerce Commission. The notes will be issued under a conditional sale agreement and assignment, dated December 1, 1944, and will mature in 30 consecutive equal quarterly installments, beginning June 1, 1945. Proceeds will be applied to the purchase of ten 1,000-hp. Diesel-electric switching locomotives from the Baldwin Locomotive Works, deliveries of which are expected in January and February, 1945.

CENTRAL OF NEW JERSEY.—Court Extends Plan Time.—The United States district court has extended for six months from October 30 time in which company must file a plan of reorganization under the bank-ruptcy laws.

CHESAPEARE & OHIO.—Equipment Trust Certificates.—This company has applied to the Interstate Commerce Commission for authority to assume liability for \$,600,000 of its sixth equipment trust of 1944 certificates in connection with its purchase of 1,250 50-ton hopper cars from the American Car & Foundry Co. at a cost of \$3,241,812 and of five 2-6-6-6 type freight locomotives with 25,000-gal. tenders from the Lima Locomotive Works at a cost of \$1,416,561.

CHICAGO, BURLINGTON & QUINCY.—Asks Bids on Bond Issue.—The Chicago, Burlington & Quincy, on October 24, called for bids on a proposed \$40,000,000 bond issue. Bids will be opened on November 1.

CHICAGO, BURLINGTON & QUINCY. — Equipment Trust Certificates.—This company has advised the Interstate Commerce Commission that it has accepted a bid of the First National Bank of Chicago and others for its proposed issue of \$1,520,000 of equipment trust certificates on a 1.849 per cent interest basis. (Previous item in Railway Age of October 21, page 638.)

CHICAGO, MILWAUKEE, St. PAUL & PA-CIFIC.—Reorganization.—The appeal taken from the revised plan of reorganization for the Chicago, Milwaukee, St. Paul & Pacific was dismissed by the Seventh Circuit Court of Appeals on October 31, the action clearing the way for consummation of the plan. The appeals were filed in July by counsel representing two groups of adjustment bondholders, the trustee of the adjustment mortgage, and the debtor and on October 12 the court took the appeals and a motion to dismiss them under advisement. Ballots for voting on the proposed plan and returnable to the Interstate Commerce Commission by November 29 have already been received by security holders.

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CHICAGO & NORTH WESTERN.—Reorganization Expenses.—The Interstate Commerce Commission, Division 4, has approved maximum allowances for the period from September 1, 1943, to the termination of the proceedings for certain services rendered and expenses incurred in connection with this road's reorganization. Claims approved totaled \$190,159 out of \$204,619 sought. All amounts involved were relatively small except the claim of counsel for the reorganization managers, that of Sidley, McPherson, Austin & Burgess for \$129,107, of which \$119,107 was approved, and of Oliver & Donnally for \$47,977, of which \$42,977 was approved.

CHICAGO, ROCK ISLAND & PACIFIC .- Payment of R. F. C. Loan.-A proposal of the trustees of the Rock Island to pay off \$13,-718,700 of collateral loans to the Reconstruction Finance Corporation with interest at 4 per cent was taken under advisement by the federal District court at Chicago on October 31. In presenting their motion, the trustees stated that on January 1, cash and its equivalent stood at \$82,000,000 while now it is approximately \$102,000,000 and more than sufficient to pay not only the \$38,000,000 cash distribution to security holders, but also to take care of the R. F. C. obligation. They further contended that a conservative estimate of the Rock Island's cash position as of June 30, 1945, places the amount at \$113,000,000 and that paying the R. F. C. claim, totaling \$18,000,000, would not impair working capital.

At the same time, the trustees said that the payment of the R. F. C. loan at this time would not only save the railroad interest and dividends of \$755,000 a year on new securities to which the R. F. C. is entitled under the pending reorganization plan, but would save considerable interest on the outstanding debt which runs at 6 per cent or \$823,000 annually. In addition some \$33,000,000 in cash and new securities allotted to R. F. C. would revert to the company's treasury.

A representative of the R. F. C. stated that that agency was willing to accept such a settlement if ordered by the court and also offered the trustees the option of a similar settlement, after consummation of the plan, through "repurchase" of the new securities.

Counsel for the general mortgage bondholders committee, who objected to payment now of the R. F. C. claim, pointed out that payment would "involve a risk that the plan will not be carried out" and contended that the court had no power to order the payment because the general mortgage bondholders had a lien on the earnings of the railroad. Others entering objections to the proposal were the first and refunding mortgage group; the Rock Island, Arkansas & Louisiana first mortgage bondholders; the Choctaw & Memphis bondholders; the Choctaw, Oklahoma & Gulf consolidated bondholders; and the National City Bank as trustee for the secured 41/2 per cent bonds.

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DELAWARE, LACKAWANNA & WESTERN.-Morris & Essex Merger .- Directors of the Morris & Essex have signed a formal agreement of merger with the Delaware, Lackawanna & Western.

GREAT NORTHERN .- Promissory Notes .-The Great Northern will receive bids until November 8 for the purchase of \$2,001,918 of promissory notes to cover the purchase four Diesel-electric road locomotives from the Electro-Motive division of the General Motors Corporation.

NEW YORK, SUSQUEHANNA & WESTERN. -Interest Payment .- This railroad has notified holders of its terminal first mortgage 5 per cent bonds, matured May 1, 1943, that the United States district court has authorized payment on November 1 of six months' interest at the rate of 4 per cent per annum from May 1, 1944, to that date on the \$2,000,000 of the bonds outstanding. Interest will continue thereafter on May 1 and November 1 of each year at the rate of 4 per cent per annum, instead of 5 per cent as heretofore, until further order of the court. The railroad's plan for reorganization recommended by the I. C. C. on July 19, 1944, provides for 4 per cent interest on the new or extended terminal first mortgage bonds from January 1, 1944. If the plan is consummated, an adjustment will be necessary to compensate for the interest payment made at the rate of 5 per cent per annum from January 1, 1944, to May 1, 1944.

OKLAHOMA CITY JUNCTION.—Par Value of Stack.—This company has applied to the Interstate Commerce Commission for authority to issue 10,000 shares of capital stock of \$20 par value to replace a like amount of stock outstanding, which was issued in 1941, without authority of the commission, to replace an equal number of shares of \$100 par value, the purpose of the exchange being a reduction of the total capitalization from \$1,000,000 to \$200,000.

SEABOARD AIR LINE.—Georgia, Florida Alabama Trustee.-Leon S. Dure, receiver of the G. F. & A., has applied to the Interstate Commerce Commission for ratification of his appointment by the court as trustee of that road in reorganization proceedings under section 77 of the Bankruptcy

Southern.—Acquisition of Subsidiaries. This company has applied to the Interstate Commerce Commission for authority to acquire the properties of three subsidiary companies which it controls through ownership of all outstanding stock and bonds. These companies are the Southern Railway in Kentucky, Southern Railway of Indiana. and Cumberland Railway.

TAMPA NORTHERN .- Trustee .- Division 4 of the Interstate Commerce Commission has ratified the appointment of Cody Fowler as substitute trustee of this road in its section 77 reorganization proceedings.

WESTERN PACIFIC.-Reorganization Authorized-Consummation of the modified plan for this road's reorganization under the provisions of section 77 of the Bankruptcy Act, which was approved by the Interstate Commerce Commission in 1939 (as reported in Railway Age of July 29, page 195) and confirmed by the federal court, has been authorized by Division 4 of the commission in a supplemental report and order approving accompanying security issues and effecting certain minor changes in its details. The former properties of the debtor company will be revested in that company, and no new corporation will be organized. The effective date of the plan is January 1, 1939.

Aside from equipment obligations to be assumed, which total \$6,965,400, the new capitalization will include \$10,000,000 of series A first mortgage 4 per cent bonds, \$21,219,075 of series A general mortgage 4½ per cent income bonds, \$31,850,297 of 5 per cent preferred stock, and 319,441 shares of common stock without par value. The entire issue of first mortgage bonds will be issued at par to the Reconstruction Finance Corp., which also will receive \$1,185,200 of the general mortgage income bonds, \$1,777,800 of the preferred stock, and 15,788 shares of the common stock. Holders of old first mortgage bonds will receive \$19,716,040 of new general mortgage bonds, while the Railroad Credit Corp. will receive \$154,080 and the A. C. James Co. \$163,680 of the same issue. The Railroad Credit Corp. also will receive \$241,640 of preferred stock and about 35,425 shares of common, while the A. C. James Co. will receive \$256,700 of preferred and 37,635 shares of common. Holders of old first mortgage bonds also will receive the balance of the new preferred stock, amounting to \$29,574,060, and 230,184 shares of new common. In addition, 424,380 shares of common will be held in reserve for conversion of the general mortgage income bonds.

#### Average Prices Stocks and Bonds

Average price of 20 repre-	Oct. 31	Last week	Last
sentative railway stocks.  Average price of 20 repre-	42.07	42.10	37.03
sentative railway bonds.	90.41	90.25	79.35

#### Dividends Declared

Cleveland & Pittsburgh. — 7% guaranteed, 87½¢, quarterly; special guaranteed, 50¢, quarterly, both payable December 1 to holders of record November 10.

Erie.—certificates of beneficial interest, 50¢, payable December 15 to holders of record November 30.

vember 30. Great Northern.—preferred, \$1.00, quarterly, payable December 16 to holders of record No-

payable December 16 to holders of record November 13.

Nashville, Chattanooga & St. Louis (year-end).

\$\times 1.00\$, payable December 1 to holders of record November 8.

Norfolk & Western.—\$2.50, quarterly, payable December 9 to holders of record November 20.

Reading.—4% 1st preferred, 50¢, quarterly, payable December 14 to holders of record November 22.

#### Abandonments

NORTHERN PACIFIC.—This company has applied to the Interstate Commerce Commission for authority to abandon a 25.8mile segment of main line from New Salem, N. D., to Kurtz upon completion of a shorter line on a new location.

OKLAHOMA CITY JUNCTION.—This road has applied to the Interstate Commerce Commission for authority to abandon operation of the livestock loading and unloading facilities at the Oklahoma National Stock Yards, Oklahoma City, Okla.

READING.—This company has applied to the Interstate Commerce Commission for authority to abandon two segments of its Schuylkill and Susquehanna branch, one from a point near Auburn, Pa., to Auchenbach, 15.2 miles, and one from Rockville to a point near Rausch Gap, 22.6 miles, and also to abandon operation under trackage rights over the Pennsylvania from Rockville to Harrisburg, 5.6 miles.

SEABOARD AIR LINE,-This road has applied to the Interstate Commerce Commission for authority to abandon a branch from Lydia, S. C., to Timmonsville, 17.1

Southern Pacific.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a portion of a branch from Grace, Calif., to Wilson, 12.29 miles, upon completion of a new connection between the segment of the branch not abandoned and the road's main

A \$16,478 INVESTMENT.-In a recent advertisement, appearing in some 300 newspapers along its lines, and designed to make clear to the public that the Louisville & Nashville "represents private investment and free enterprise working constantly and efficiently for the betterment of employees, investors and the public," the railroad reveals that for each one of its employees there is represented an average investment of \$16,478. Its owners, the L. & N. explains, have an investment in equipment of more than \$536 million, and their employee count totals 32,500. "The mutual interests of investor and worker are inseparable," the railroad makes plain.

8,000,000 MEALS MONTHLY are served by British Railway staff canteens, T. D. Slattery, general traffic manager, British Railways, in New York, reports. Whereas there were, at the outbreak of the war, 189 canteens at stations and depots belonging to main-line railways and the London Passenger Transport Board, today there are 528, with an additional 87 under construction, and with plans in preparation for another 117. Existing canteens, he explains, have seating accommodations for 53,000 at

One of the busiest staff canteens is at Paddington on the Great Western. Open to members of the armed forces, this canteen has catered to 12,000,000 persons since the war.



## DEPENDABLE BRAKING STARTS HERE

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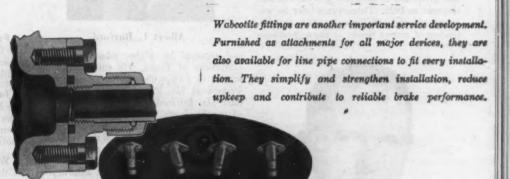
The dependability and responsiveness that make the engineer the master of 150-car freights and 100 mph streamliners do not come from the brake equipment alone. Accessories, such as the compressor and aftercooler, can claim some of the credit.

These devices, like the brakes themselves, are the end-products of three quarters of a century of research and development. Refinements such as the improved inlet filter that screens the air, and the mechanical lubricator that "meters" wear-banishing oil, help to extend compressor life and maintain a high level of performance. The aftercooler drops out extra moisture and so adds an extra margin of operating efficiency.

Westinghouse compressors and aftercooler on the head end are a good start toward dependable braking.

#### 75 Years of Pioneering

WESTINGHOUSE AIR BRAKE COMPANY, WILMERDING, PA



1869

TO PERMIT TODAY'S TRAINS TO

MOVE AT SHORTER INTERVALS

WITH HEAVIER LOADS AT HIGHER

SPEED-SAPELY.

#### Railway Officers

#### EXECUTIVE

George M. Nolan, assistant freight traffic manager of the Southern with headquarters at Washington, D. C., has been appointed assistant to the vice-president at Columbia, S. C., a newly-created position.

W. P. Goss, general manager of the Magma Arizona Railroad, with headquarters at Superior, Ariz., has been elected vice-president and general manager, with the same headquarters, succeeding E. G. Dentzer, who has retired.

Frederic E. Lyford, trustee of the New York, Ontario & Western, has resigned, effective December 1, to become assistant to the chairman of Merritt-Chapman & Scott Corp., construction and marine salvage engineers and contractors. Mr. Lyford was born at Waverly, N. Y., on January 20, 1895, and was graduated from Cornell University with a degree in mechanical engineering in 1916. After being employed variously as an apprentice ship fitter by the Bethlehem Steel Company at Sparrows Point, Md., and as a factory inspector by the Allied Machinery Company at New York, he served with the U. S. Army in the first World War as a first lieutenant attached to the air service as an observer. In 1919 he rejoined the Allied Machinery Company as assistant sales manager at New York, and the following year, entered sales promotion work for the Tioga Mills at Waverly. Mr. Lyford began his railroad service with the Lehigh Valley as an apprentice instructor at Sayre, Pa., in 1923 and was promoted to assistant general machine foreman in 1925. Three years later he was named special engineer to the superintendent of motive power at Sayre, and soon



Conway Studios, Inc.

Frederic E. Lyford

after became special engineer to the vicepresident there. He served as examiner for the railroad division of the Reconstruction Finance Corporation from 1934 to 1936, when he became assistant to the vice-president of the Baldwin Locomotive Works. In 1937 he was appointed trustee of the New York, Ontario & Western, the position he now leaves to join Merritt-Chapman & Scott as assistant to the chairman.

#### FINANCIAL, LEGAL AND ACCOUNTING

Austin J. McMahon, assistant general counsel of the Delaware, Lackawanna & Western at New York, has retired after 35 years service. Mr. McMahon was born at Binghamton, N. Y., on October 8, 1874, and graduated from Cornell University in 1897. He was admitted to the New York bar in December, 1899, and to practice before the Supreme Court in December, 1915. He served as a lieutenant of the 203d Volunteer Infantry of New York State during the Spanish-American war and then practiced law at Syracuse, N. Y., until 1909, when he joined the legal department of the Delaware, Lackawanna & Western.

Albert L. Burford, whose promotion to general solicitor of the Kansas City Southern and the Louisiana & Arkansas, with headquarters at Shreveport, La., was reported in the Railway Age of October 21, was born in Titus county, Tex., in 1877,



Albert L. Burford

and received his higher education at the University of Texas. He entered railway service in 1906 with the St. Louis Southwestern at Mt. Pleasant, Tex. One year later Mr. Burford became district attorney of the St. Louis Southwestern, the Texas & Pacific, the Texarkana & Fort Smith, the Kansas City Southern and the St. Louis-San Francisco, with headquarters at Texarkana, Tex. On September 1, 1915, he was promoted to assistant general attorney of the St. Louis Southwestern, with headquarters at St. Louis, Mo., and in 1917 he went with the Louisiana & Arkansas as general counsel, the position he held at the time of his new appointment.

C. E. Nottingham has been appointed auditor of disbursements of the Fort Worth & Denver City and of the Wichita Valley, with headquarters at Fort Worth, Tex.

#### **OPERATING**

The Seaboard Air Line has abolished its present designation of operating mileage as Northern district and Southern district. C. H. Sauls has been appointed assistant general manager at Savannah, Ga., with

jurisdiction over the entire system. M. H. Gold, assistant general manager at Raleigh, N. C., has been transferred to Norfolk, Va.

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Walter Ross Pittman, whose appointment as superintendent of the Port Tampa terminals of the Atlantic Coast Line at Port



Walter Ross Pittman

Tampa, Fla., was announced in the October 7 issue of Railway Age, was born at Evansville, Ind., on April 9, 1886, and entered railroad service with the Illinois Central on October 1, 1903, in the train yard and freight agency at Evansville. He later served in the freight agency at Louisville, Ky., until his resignation in October, 1911. On August 21, 1912, Mr. Pittman joined the Atlantic Coast Line as rate clerk, Tampa, Fla., freight agency, and was promoted to chief clerk at Tampa in July, 1913. He was named agent, Florida transfer, in October, 1917, and became freight agent at Jacksonville, Fla., on April 1, 1922, remaining in that post until his recent promotion to superintendent, Port Tampa terminals.

#### TRAFFIC

Frank E. Johnson, commercial agent of the Central of Georgia at Chicago, has been promoted to central western agent, with headquarters at Detroit, Mich.

James S. Watson, coal freight agent of the Jersey Central Lines at New York, has been named general coal freight agent. The position of coal freight agent has been abolished.

W. C. Spencer, general passenger agent of the Southern at Washington, D. C., has been named general passenger agent at Chattanooga, Tenn., to succeed James Freeman, who will retire from active duty on December 1. Mr. Freeman was born at Greenville, Ga., on July 29, 1875, and entered railroading with the Southern as city passenger and ticket agent at Savannah, Ga., on October 1, 1898. He was promoted to traveling passenger agent at Macon, Ga., in 1901, and served subsequently as district passenger agent at Jacksonville, Fla., from 1905 to 1907, when he was transferred to Atlanta, Ga. He became assistant general passenger agent in 1912 and district passenger agent at Birmingham, Ala., in 1920. He was appointed assistant general passenger agent at Chattanooga in January, 1929, and was advanced to general passenger agent,

the position from which he will retire, on July 1, 1941.

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W. B. Gheen, general freight traffic manager of the Reading at Philadelphia, has resigned after more than 43 years service, and J. A. Fisher, freight traffic manager at Philadelphia, has been named to succeed him. Harry B. Light, general coal freight agent at Philadelphia, has been appointed freight traffic manager succeeding Mr. Fisher, while James W. Lawson, general agent, freight department, at Cincinnati, Ohio, has been promoted to general coal freight agent at Philadelphia. T. H. Ramsey, New England freight agent at Boston, Mass., has been advanced to division freight agent at Harrisburg, Pa., replacing I. L. Pish, who has been furloughed to the Pennsylvania-Reading Seashore Lines, and H. E. Pauli has been named New England freight agent at Boston.

Mr. Gheen was born at West Chester, Pa., and educated at Worrall's Academy. He entered railway service in 1900 as a telegrapher-agent with the Reading, serving all his subsequent career with this road. In 1920 he was named division freight agent,



W. B. Gheen

and in 1922 he became coal freight agent. He served as general freight agent from 1926 to 1931, when he was appointed assistant freight traffic manager. Mr. Gheen was advanced to freight traffic manager in 1936, and in 1939 he received his promotion to general freight traffic manager, the position from which he has now resigned.

Mr. Light, who was born at Lebanon, Pa. on August 22, 1893, and attended Drexel Institute, entered railroad service as a clerk in the Lebanon freight station of the Philadelphia & Reading (now the Reading) in 1911, remaining in this capacity until 1913. He joined the New York, New Haven & Hartford in 1916 as chief clerk in the express accounting department at Boston, Mass., and from 1918 to 1922 he engaged in industrial traffic work and served as salesman. On August 14, 1922, he returned to the Reading as a rate clerk in the office of the general agent, freight department, at New York, and the following September he was named chief clerk. In April of the next year he was appointed freight traffic representative at New York, remaining in this post until January, 1926, when he became assistant general agent there. He served as general agent at New York from May, 1927, to May, 1928, when he went to Philadelphia, Pa., as coal freight agent. On April 1, 1935, he was advanced to assistant general freight agent at Philadelphia, and the following year he was promoted to general freight agent. On July 16, 1938, Mr.



Harry B. Light

Light was named general coal freight agent, the position he held at the time of his recent appointment as freight traffic manager at Philadelphia.

#### **ENGINEERING & SIGNALING**

Donald L. Sommerville, assistant to the chief engineer, Central region, of the Pennsylvania at Pittsburgh, Pa., has been promoted to chief engineer succeeding C. I. Leiper, whose appointment as vice-president was announced in the Railway Age of October 14.

#### MECHANICAL

I. I. Sylvester, chief inspector of Diesel equipment, Canadian National, at Montreal, Que., has resigned, and E. J. Feasey, special engineer in the mechanical department, has been named to succeed him.

S. T. Kuhn has been appointed assistant to the general superintendent of motive power of the New York Central, at New York, succeeding F. C. Ruskaup, who has been transferred.

R. W. Daniel, master mechanic of the Chicago, Indianapolis & Louisville at Lafayette, Ind., has been appointed acting superintendent of motive power, with the same headquarters, succeeding W. M. English, who has been granted a leave of absence to enter military service as a colonel.

#### PURCHASES AND STORES

J. B. Fraser, district storekeeper of the Canadian National, Western region, at Transcona, Man., has been appointed general storekeeper, Atlantic region, with head-quarters at Moncton, N. B.

H. P. McQuilkin has been appointed assistant purchasing agent of the Baltimore & Ohio with headquarters at Baltimore, Md. E. W. Walther, acting assistant purchasing agent, has been named general storekeeper at Baltimore.

#### SPECIAL

Dr. Harvey Bartle, chief medical examiner of the Pennsylvania with head-quarters at Philadelphia, Pa., has retired after 41 years service. Dr. John A. White II, medical examiner at Washington, D. C., has been appointed to succeed him.

#### **OBITUARY**

Larry C. Bostwick, eastern traffic manager of the Wabash at New York, died in a hospital at Plainfield, N. J., on October 25. He was 68 years old.

William E. Riggs, who retired in February as chief special agent of the Railway Express Agency, died in a hospital at Elgin, Ill., on October 29.

Frederick Tench, president of Terry & Tench Company, steel construction engineers for many years associated with the New York Central System, who helped build the Grand Central Terminal in New York and the New York Central drawbridge across the Harlem river at Park avenue and 135th street, New York, died at White Plains, N. Y., on October 26. He was in his eighty-second year.

Willis L. Reeves, general freight agent of the Illinois Central, with headquarters at Chicago, died at his home in that city on October 29. Mr. Reeves was born at Trenton, Ky., on December 25, 1884, and entered the service of the Illinois Central in 1902 as a clerk in the freight office at Louisville, Ky. Subsequently he was appointed telegraph operator at the same point and then station accountant, being sent to Memphis, Tenn., in 1906, as a rate clerk. After a time Mr. Reeves was advanced to chief clerk and, on April 1, 1920, he was further promoted to assistant general freight agent at the same point. On September 1, 1930, he was transferred to Chicago, and in November, 1931, he was advanced to assistant to the freight traffic manager. Four years later Mr. Reeves was promoted to the position he held at the time of his passing.

John Walter Wardlaw, chief of transportation of the Canadian National at Montreal, Que., died on October 24. He was 64 years old. Mr. Wardlaw was born at Galt, Ont., in 1882, and entered railroad service in 1902 with the Grand Trunk (now the Canadian National), serving until 1905 as clerk and stenographer. He then transferred to the Central Vermont and after filling various positions in the offices of the general manager, vice-president and president he was named assistant to president, and purchasing agent in 1915. Three years later Mr. Wardlaw became general manager of the Central Vermont, continuing in that capacity until 1929 when he joined the Canadian National as superintendent of passenger train service. He was appointed superintendent of freight train service in 1932, and in June, 1936, he became general superintendent of transportation for the Central region, with headquarters at Toronto, Ont. He was appointed chief of transportation for the National system in February of this year. A photograph of Mr. Wardlaw and a sketch of his career appeared on page 444 of the February 26 issue of Railway Age.



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Freight Operating Statistics of Large Steam Railways-Selected

/			Locomotive-miles			-miles		Ton-miles (thousands)		Road locos, on line			
4	Miles o	d Train-	Principal		(thou-	ed Per	excl. locos		Service		- 0	Per cent	
Region, road, and year New England Region:	operate	ted miles	helper		t sands)	s) loaded	d & tenders	s non-rev.	Unstored	Stored	B. O.	. В. О.	
Boston & Albany	3 362	2 169,934	4 210,706	36,416 38,645	4,423	6 62.1	299,254	5 121,214 4 127,171 4 398,540	77	4	17 11	18.1	
Boston & Maine	4 1,807 3 1,807	7 379,639 7 415,889	429,048 491,559	38,933 <b>59,740</b>	13,534	4 68.1	877,394 974,701	4 398,540 1 444,049	161 158	· · · · · · · · · · · · · · · · · · ·	20 21	11.0 11.7	
N. Y., New H, & Hartf.†1944	4 1,815 3 1.815	5 480,840	630,443	56,828 61,386	17,073	5 67.6 5 65.9	1,219,325	481,529 5 543,763	223 224	4	40 36	16.4 17.7	
Great Lakes Region: Delaware & Hudson1944 1943	846					0 67.3 3 64.3	1,000,690	535,859	131 130	49 45	38 40	17.4 18.6	
Del., Lack. & Western1944	971 972	361,317	420,038 420,937 530,408	64,007	15,617	7 69.5	1,025,020 1,034,293 1,364,414	496,053	137 164	29	32	16.2 17.2	
Erie1944 1943	2,244	2 1,048,340	1.018./59	78,200	44,725	5 68.3 0 66.6	3,191,790	639,748 3 1,282,809 3 1,425,457	327 308	20 10	54 81	13.5 20.3	
Grand Trunk Western1944 1943	1,026	260,274 296,481	265,426 303,677	3,256	8,270 9,012	<b>67.6</b> 65.9	532,803 617,080	237,941	67 68	2	13 11	16.3 13.6	
Lehigh Valley	1,247	559,541 526,268	621,548 587,786	87,298 92,246	23,890 21,941	0 59.7 1 60.1	1,739,806	818,436 754,263	155 148	**	12	7.2 5.7	
New York Central 1944 1943	10,325	3,694,026 4,074,230	3,973,403 4,403,678	236,539. 263,027	141,844 156,186	4 63.3 5 60.6	9,931,951 11,365,768	4,650,943 5,295,938	1,118 1,193	35 12	223 196	16.2 14.0	
New York, Chi. & St. L1944 1943	1,657	815,814 874,140	830,203 894,060	9,542 11,716 10,227	32,619 33,727	67.5	2,130,187 2,253,985 1,039,289	1,025,747	175 159	.6	17	8.6 9.7 15.2	
Pere Marquette	1,915 1,964 229	492,240	510,040	10,227 12,118 14	15,324 15,856 4,356	62.3	1,039,289 1,116,096 368,261	522,636	142 137 36	1	26 25 9	15.2 15.3 20.0	
Pitts. & Lake Erie1944 1943 Wabash1944	231 2,381	95,917	101,844	18,715	4,256 27,539	65.2	368,261 367,002 1,788,202	218,867 818,459	34 173	1 3	13 45	27.1 20.4	
Central Eastern Region:	2,381	786,739	816,274	19,510	28,937	69.2	1,916,707	898,846	181	6	37	16.5	
Baltimore & Ohio		2,609,012	3,227,852	331,172 351,824	89,748 89,940	62.6	6,607,220 6,603,449 678,401	3,300,487 3,279,930	958 926	i	199 183	17.2 16.5 17.0	
Central of New Jersey† 1944	655 <b>657</b>	241,600 262,745	285.167	60,536	9,050 8,742	62.3	678,401 630,839 650,909	336,946 328,953	115 132	7 6	25 17	11.0	
Chicago & Eastern Ill1944	912 912	300,287 313,785	306,354 327,357	8,447 10,021	9,184 9,391	60.8 58.5	684,327	297,947 309,478	76	2	7 8	8.4 9.1	
Elgin, Joliet & Eastern 1944 1943	392 392 <b>372</b>	138,300	137,837 141,432	3,386 2,299 16,482	3,807 3,855	66.1	294,513 303,499 38,475	161,314 172,883 14,951	57 62 48		17 14 3	23.0 18.4 5.9	
Long Island	372 374 9,872	47,970	43,830 49,704 5,512,945	16,482 15,719 712,598	546 601 185,110	53.5	38,475 45,505 13,288,144	17,012 6,562,976	48 41 2,015	2	177	14.6 8.1	
Reading	9,932 1,409	5,130,441 607,376	6,013,228 683,438	794,544 84,898	197,519	61.9	1,492,150	7,164,679 813,260	1,972 257	16	198	9.1	
1943	1,416	607,971	683,194	92,152	19,883 19,772		1,538,225	836,199	282	12	43	12.8	
Pocahontas Region: Chesapeake & Ohio1944	3,032 3,028	1,148,082	1,227,358 1,239,703	60,960 57,038	54,219 52,760	56.0	4,705,893 2 4,642,544 2	2,637,574	426 425	18	71 71	13.8	
Norfolk & Western1944 1943	2,132 2,133	810,457 812,409	860,970 871,920	58,064 67,003	38,427 36,276	59.3	3,307,463 1 3,216,468 1	1.793.259	281 306	30 17	19 13	5.8 3.9	
Southern Region: Atlantic Coast Line1944 1943	<b>4,953 4,947</b>	<b>918,870</b> 937,762	932,582 962,273	14,288 14,422	24,597		LG TIMEN	753,243 795,628	365 343	15	35 28	8.4	
Central of Georgia†1944 1943	4,947 1,783 1,783	937,762 384,177 330,360	962,273 395,180 339,218	14,422 6,146 5,938	26,013 9,081 7,948	63.9 66.1 70.5	1,653,297 1,757,341 612,091 521,030	795,628 284,822 241,941	343 94 106	21	28 11 11	7.1 10.5 9.4	
Gulf, Mobile & Ohio1944 1943	1,941	299,837 343,664	376.820	5,938 4,038 3,461	7,948 11,183 11,791	73.9	716,209 725,360	352,175	106 108 113	1 2	12	9.4 9.9 6.5	
Illinois Central (incl. 1944	6 347	1,704,090 1,731,930 1,634,131	439,379 1,714,780 1,743,822	31,428 32,625	66,139 66,837	63.2 61.5	4,627,898 2 4.816,907	2,168,957 2,259,506	656 608		49 78	7.0	
Louisville & Nashville 1944	6,348 4,734 4,736	1,634,131 1,610,543	1,743,822 1,752,714 1,743,684	45.474	42,645	64.0	4,627,898 2 4,816,907 2 3,061,630 1 2,960,756 1 1,643,630 1,558,476	1,577,764 1,510,586	404 429	22 10	65	- 13.2 - 8.5	
Seaboard Air Line*1944	4,164	1,610,543 864,570 843,882 2 295 099	1,743,684 937,757 972,349	44,868 15,023 10,098	24,817 23,015	67.5 67.1	1,643,630 1,558,476	763,598 737,447	292 289	13	44	12.9 12.0	
Southern	6,471	2,295,099	2,358,016 2,120,797	40,506	52,976	68.5 68.4	3,414,276 1 3,012,470 1	,573,252 1,399,180	605 586		90 90	12.9 13.3	
Northwestern Region: Chi. & North Western 1944 1943	8,074 8,098	1,101,115 1,195,516	1,154,370 1,248,893	23,760			2,514,182 1 2,755,597 1		374 375	12 20	90 94	18.9 19.2	
Chicago Great Western1944 1943	1,445	284,928 292,894	1,248,893 292,598 300,188	23,760 24,439 7,037 9,877	9,449	72.6	596.034	268,425	375 74 67	20	94 8 14	19.2 9.8 17.3	
Chi., Milw., St. P. & Pac.†1944	10,715	1,610,827	1,713,360 1,700,769	85,585 75,089	56,150	68.2 67.2	631,423 3,761,129 1 3,741,873 1	793,784	519 492	31 41	66 74	10.7 12.2	
Chi., St. P., Minneap. & Om. 1944 1943	1,606 1,606	217,181 245,600	232,508 262,373	12,585	5,824 6,546	68.5 66.3	390,607 466,407	179,098 220,947	98 100	27 26	12	8.8 4.5	
Duluth, Missabe & I. R1944 1943	546 546	175,975 197,008	176,897 197,894	1,382	9,717	50.8 51.3	903,991	555,109 628,231	53 55		1	1.9	
Great Northern	8,276 8,214	1,350,301	1,351,160 1,289,140	52,713 56,300	54,135 50,725	65 7	3,973,812 2, 3,786,711 1,	2 008 136	412 392	24	60	8.4 13.0	
Min., St. P. & S. St. M.† 1944 1943 Northern Pacific1944	4,258	481,949	471,017 495,529	8,697 11,204 90,137	12,897 13,329	61.3	905,654 988,752 3,061,801 1,	476,726	126 130 377	1 13	6	5.2 4.4 13.3	
Northern Pacific	6,571 6,572	1,042,118	1,121,597 1,034,481	90,137 80,730		70.5	3,061,801 1, 2,785,209 1,	,415,587	377 358	13	50	13.3	
Alton†	915 915	281,836 277,114	300,934 291,958	420 612		72.7 69.9	516,184 517,623	235,554 260,535	75 72	1	3 6	3.8	
Atch., Top. & S. Fe. (incl. 1944 G. C. & S. F. & P. & S. F.) 1943	13,093	3,604,152 3 2,940,201 3	3,859,282 2 3,185,217 1	218,565 1 189,100 1	133,859	65.1 8 66.3	8,972,758 3, 6,752,534 2,	3,639,557 2,780,304	864 827	4 .0	121 100	12.2 10.8	
Chi., Burl. & Quincy 1944 1943	8,791 8,833	1.499.334 1	1.572.159	51.391	57,205 57,646	65.6	3,960,391 1, 4,137,037 1,	1,858,484	476 477		65	12.0 11.2	
Chi., Rock I. & Pac.†1944 1943	7,718	1,450,461 1	1,473,474	16,626	40,288	69.3		1.359.837	397 395	::	72	15.4 15.1	
Denver & R. G. Wn.† 1944 1943 Southern Pacific—Pac Lines 1944	2,388	489,333 512,880	547,699 592,844	79,597	17,574	77.4 1	1,093,740	532,385 553,273	177 188	6 2	47 36	20.4 15.9	
Southern Pacific—Pac. Lines. 1944 1943 Union Pacific	8,193 8,230 9,782	2,440,319 2 2,381,496 2 3,115,658 3	592,844 2,797,483 4,2,698,106 4,3,309,964 3,416,934 2	93,300 429,441 1 422,471 263,755 1	105,689 95,891	69.4 65.0 71.4	1,163,699 6,873,740 2, 6,434,916 2, 7,920,613 3,	,928,939 ,649,170	897 825 787	3	105 143	10.5	
Southwestern Region: 1943	9,782					67.3	7,865,248 3,	,492,920	787 821	31	72 63	8.1 7.1	
MoKansTexas Lines 1944	3,241 3,281	786,920 710,480	810,446 725,818	16,648 12,229	21,285	61.4 1	1,449,738	644,523 560,341	153 160	**	18 15	10.5	
Missouri Pacific†1944	7,071 1	710,480 1,751,257 1 1,860,977 1	810,446 725,818 1,811,590 1,942,530 451,466	12,229 40,759 47,514	64,554	66.7 4	4,294,903 1, 4 369,414 2	.956.021	485 484	2	58	10.6 12.1	
Texas & Pacific	1,882 1,882	3/4,890	3/4,890	6,625 6,148	15,183	65.1 1	802,281	,017,562 415,472 336,291	131 112	13	5	3.4 13.4	
St. Louis-San Francisco† 1944	4,616 1 4,634 1	1,093,571 1 1,188,221 1	1,179,820 1,259,713	27,841	27,688 6	67.3 1 64.2 1	1,818,990 1,967,756	836,504 886,538	316 328		34 25	9.7 7.1	
St. Louis-San Fran. & Texas. 1944  St. Louis-San Fran. & Texas. 1944  St. Louis-Southw. Linest 1944	159 159	35,132 36,167	36,572 36,710	28 16	608 7 542 6	00.0	30,307	16,756 16,329	9		2	18.2	
St. Louis Southw. Lines†1944 1943 Texas & New Orleans1944	1,600 1,600 4 333	487,738 570,375	493,537 582,124	8,172	18,112	69.1 1	1,152,618 1,233,329	535,330 533,568	115 117	2 2	23	16.4 14.4 5.9	
1943	4,333 1 4,339 1	1,173,342 1	1,176,032	47,176	32,189	67.9 2	2,104,198	943,204 963,774	269 258		17	6.2	
* Report of receivers.													

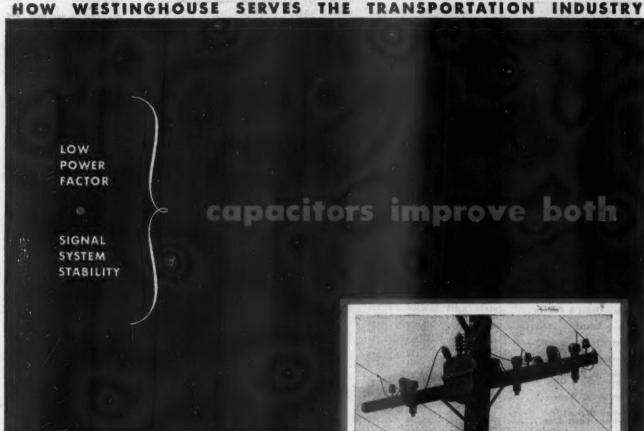
<sup>\*</sup> Report of receivers. † Report of trustee or trustees.

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Items for the Month of	Augus	t 1944 Freight ca	Compa	ared		G.t.m. per	Net ton-mi.	Net ton-mi.	Net ton-mi.	Car	Net daily	Coal lb. per	Mi. per
TION INDUSTRY	ATRO	NSP	ART	Per	excl.locos	excl.locos.		per l'd.	per car-	per car-	ton-mi.	1000 g.t.m.	per
Region, road, and year	Home	Foreign	Total	B. O.	tenders	tenders	mile	mile	day	day	road-mi.	inc. loco	
New England Region: Boston & Albany1944	362	6,024	6,386	0.4	25,176	1,694 1,777	708 755	28.1	665	38.1 38.8	10,801 11,332	170 169	91.0
Boston & Maine	365 2,503	5,818 10,422	6,183	3.5	26,591 35,885	2,321 2,355	1,054	29.4	993	49.5 54.5	11,332 7,115 7,927	95 93	91.2
N. Y., New H. & Hartl. 1943	2,663	10,801 20,613	13,464 24,291	4.0	35,437 33,988	2,317 2,343	1,017	27.2 28.7	659 694	35.8 36.6	8,558 9,664	95 92	83.9 90.7
Great Lakes Region:	3,814	21,231	25,045	2.2	34,135	3,060	1,639	38.7	1,844	70.8	20,432	97	69.1
Delaware & Hudson1944 1943	3,624 4,163	6,096 5,458	9,720 9,621	3.7	51,181 48.711	2,999 2,892	1,582	39.3 31.8	1,710	67.7	20,571 16,480 21,232	97 113	72.8 86.4
Del., Lack. & Western1944 1943	5,605 6,114	12,837 14,285	18,442 20,399	3.6	40,722 42,691 50,704	3,254 3,104	1,526	32.3 28.7	995 1,056	47.5 53.9	18,441	117 87	95.7
Erie	7,522 10,107	32,009 25,65\$	39,531 35,762	3.0 2.6	51,569 41,782	3,056 2,058	1,365	29.5 28.8	1,276 781	65.0	20,510	79	105.1
Grand Trunk Western1944 1943	2,578 2,148	· 6,197 6,830	8,775	4.8 5.0 1.9	44,612 51,911	2,093 3,221	989 1,515	32.4 34.3	917	49.2	21,172	100	129.0
Lehigh Valley	6,301 5,887	21,135 21,932	27,436 27,819 145,632	1.6	50,657 43,283	3,119 2,718	1,476 1,273	34.4	1,029	42.5	19,496 14,531	99	146.2
New York Central	44,279 48,122	101,353 106,800 10,704	154,922	2.5 2,6	44,047 48,721	2,828 2,621	1,318	33.9 29.5	1,117	97.1	16,482 18,756	91 84 79	118.8 147.0 169.6
New York, Chi. & St. L 1944 1943 Pere Marquette	2,655 3,571 2,253	14,046	17,617	2.7	49,231	2,590 2,374	1,178	30.4	1,922 1,280	97.4 61.2	19,969 8,247	85 78	93.7
1943	3,036	8,999 9,316	12,035	2.7	39,609 53,472	2,293 3,857 3,828	1,074 2,346	33.0 51.4	1,448	70.5	8,584 31,555 30,564	82 79	79.4 73.8
1943	3,415 5,952	7,884 12,715	11,299	5.0 3.7	52,347 45,951	2,364	2,283 1,082	51.4 29.7	1,361	17.3 66.0 65.0	11,089	97 99	121.6 125.1
1943	6,653	13,527	20,180	1.8	46,224	2,457	1,152	31.1	1,397			137	102.5
Central Eastern Region: Baltimore & Ohio1944 1943	39,803 41,021	57,335 55,429	97,138 96,450	2.9	30,956 32,561	2,647 2,583	1,322	36.8 36.5	1,083	46.4 48.0 21.8	17,417 17,314 16,594	131 115	107.4 96.5
Central of New Jersey † 1944	6,872 4,112	14,757 21,164	21,629 25,276	3.0	34,157 28,663	2,819 2,428	1,400 1,266	37.2 37.6	506 435	17.9	16,151	126 109	98.3
Chicago & Eastern Ill1944	2,311 2,573	4,619 5,272	6,930 7,845	3.5	37,839 38,301	2,221 2,246	1,017	32.4	1,290 1,353 346	70.1	10,946 13,275	106 124	128.4
Elgin, Joliet & Eastern 1944	9,095 8,663	6,126 6,489	15,221 15,152	2.7 5.2	19,203 18,864	2,344 2,306	1,284	42.4 44.8 27.4	352 . 81	11.9	14,227	120 288	86.9 56.4
Long Island	36 18	5,922 5,568	5,958 5,586	.5	7,423 7,657	941 981	366	28.3	109	7.2	1,467	268 110	66.0 99.1
Pennsylvania System1944	113,949 119,502	128,262 122,796	5,586 242,211 242,298	3.5	39,158 38,886	2,887 2,923	1,426	36.3	942	42.0 25.3	23,270	111	109.1 88.5
Reading	12,535 11,280	26,478 25,094	39,013 36,374	1.7 2.2	30,703 31,017	2,459 2,536	1,340	42.3	758	28.3	19,050	112	87.3
Pocahontas Region: Chesapeake & Ohio1944	33,645	18,622	52,267	1.3	58,766	4,177	2,412 2,333	50.1	1,670 1,575	57.7 56.3	28,905 28,099	71 69	87.7 91.1
Norfolk & Western 1943	38,587 30,960	16,789 8,674	55,376 39,634	2.0	58,330 64,940	4,106 4,138 4,030	2,333 2,244 2,199	46.7	1,463	52.9 53.6	27,133 26,535	83	96.9 96.9
Southern Region:	30,964	6,885	37,849	1.9	62,793		824	30.6	1.049	52.9	4,906	103	77.4
Atlantic Coast Line1944	7,442 7,852	15,550 20,177	22,992 28,029	2.7 3.3	30,502 31,314	1,809 1,885 1,609	853 749	30.6 31.4	971	49.7	5,188 5,153	101 122	84.9 129.9
Central of Georgia†1944 1943	1,899 2,465	7,115 6,586 6,778	9,014	1.5	30,002 28,866 41,361	1,591 2,396	739 1,178	30.4 31.5	890 1,281	41.5 55.0	4,377 5,853	114 107	101.5
Guff, Mobile & Ohio 1944 1943	2,111	7,495	8,889 9,872 56,187	.9 .9 1.1	39,998 44,595	2,266 2,774	1,105 1,300	32.1 32.8	1,277	57.0 62.9	6,219	109	121.9 83.9
Illinois Central (incl. 1944 Yazoo & Miss. Vy.)1943	18,837 19,245	37,350 33,019 14,911	52,264 43,659	3.7	43,619 29,374		1,335	33.8 37.0	1,387	66.7 48.8	11,482 10,751	104	87.7 125.8
Louisville & Nashville1944 1943 Seaboard Air Line*1944	28,748 28,887	15,667 16,281	44,554 22,638	2.6	28,594 32,778	1,838 1,940	938	37.7	1,084	46.5 52.1	10,289	116	125.7
1943	6,357 7,015 15,845	16,277	23,292 50,531	1.6	31,389	1,890	894 697	32.0	1,053	49.8	5,713	110	100.9
1943	16,183	30,222	46,405	1.8		1,469	682	30.2	984	47.6	6,967	136	107.5
Northwestern Region: Chi. & North Western 1944 1943	22,099 22,162	34,429 31,714	56,528 53,876	3.2	35,557 35,765	2,370 2,391	1,064	31.0	652 754	31.4	4, <b>\$</b> 12 5,160	107	85.0 89.4
Chicago Great Western1944	1,007	4,728 4,708	5,735 5,936	1.9	36,071 38,757	2,100	1,018	28.4 31.9	1,465	71.0 69.3	5,992 6,631	113	124.7 132.7 102.4
Chi., Milw., St. P, & Pac. † . 1944	23,840 25,077	33,280 29,347	57,120 54,424	1.8	36,561 36,183	2,359	1,125	31.9	1,045	48.0	5,400	110	102.4
Chi., St. P., Minneap. & Om. 1944 1943	822 1,447	7,096 7,296	7,918 8,743	4.7 6.4	24,898 27,972	1,842	933	30.8	783 820	37.2 36.6	3,597 4,438	101 98 56	70.1
Duluth, Missabe & I. R 1944 1943	15,146 14,841	567 356	15,713	2.7	91,655 89,658	5,269 5,305	3,236 3,276	57.1 57.4	1,153	39.7 45.4	32,796 37,116	55	129.0 102.9
Great Northern 1944	22,728	21,232 21,865	15,197 43,960 45,535 14,711	1.8	45,097 45,782	2,960 2,960	1,496 1,546	37.1 39.0	1,531	62.8 56.9 46.5	7,827 2,770 3,269	82	101.1
Min., St. P. & S. St. M.† 1944 1943	6,396 7,111 17,197	8,315 6,736 22,721	13,847	2.5	33,954 35,314	1,998 2,069	952 998	33.5 35.8 32.9	1,000 1,128 1,231	51.4	3,612 7,306	81	123.9 95.0
Northern Pacific	17,197	22,721 16,018	39,918 34,930	3.2	44,432 43,892	2,951 2,889	1,434	34.3	1,334	53.4	6,948	118	88.5
Central Western Region:	1,832	7,499 6,922	9,331	2.4	40,321	1,844	842 952	29.3	827 993	38.8	8,304 9,185	118	129.4 127.7
Atch., Top. & S. Fe (incl. 1944	1,169 43,161	52,885	8,091 96,046	3.5	40,655	1,892 2,506 2,310	1,016	27.2 27.7	1,173	66.3	8,967 6,821	106	138.1
Atch., Top. & S. Fe (incl. 1944 G. C. & S. F. & P. & S. F.) 1943 Chi., Burl. & Quincy 1944	50,792 17,516	38,902 31,116	89,694 48,632	3.1 2.1	38,674 41,521 40,995	2,655 2,612	1,246	32.5 33.8	1,299 1,257	61.3 58.4	6,820	106	103.0
Chi., Rock I, & Pac.†1944	18,376 10,369	30,970 24,004	49,346	3.1	35,975 33,940	2,054 1,964	942	29.9	1,267	61.1	5,684 5,202	103	110.5
Denver & R. G. Wn. † 1944	12,526	21,367	33,893 18,656	3.4 3.4 2.9	35,369 30,973	2,262 2,302	1,101	30.3	969 919	41.3	7,192	158 164	95.3 105.8
Southern Pacific—Pac. Lines. 1943	8,089 25,122	10,657 59,331	18,746 84,453	2.5 2.3 2.4	38,369 36,137	2,837 2,721	1,209	27.7 27.6	1,127	58.6 54.8	11,532	. 96	112.2 110.4
Union Pacific	26,554 27,776 28,258	60,864 42,222 47,818	87,418 69,998 76,076	2.4	49,239 42,945	2,569	1,159	28.4	1,667	82.2 76.5	11,782 11,483	115	135.1 139.3
Southwestern Region: MoKansTexas Lines 1944		8,559	10,204	0.4	33,127	1,851	823	30.3	1,999	107.6	6,415	79	163.2
Missouri Pacifict1944	1,645 2,429 10,885	7,539 29,089	9,968 39,974	.9	32,658 40,799	1.823	793 1,122	29.0 30.3	1,678	93.3 76.6	5,509 8,923	79 99	142.2 115.5
1943 Texas & Pacific	10,277	34,649 7,735	44,926 9,059	1.6	39,958	2,359	1,089	31.9	1,444	70.1 86.0	9,205 7,121	100	122.3 105.0
St. Louis-San Francisco†1943	1,471 6,382	6,094 13,231	7,565 19,613	1.6	42,354 41,231 32,569	2,160 1,670	906 768	28.2 30.2	1,433	77.1 67.0	5,764 5,846	124	92.2
St. Louis-San Fran. & Texas. 1944	7,778	13,148	20,926	2.0 2.8 10.4	21,407	1,050	751 477	30.8 27.6	1,377	69.6 77.2	6,171 3,399	117	122.3
St. Louis Southw. Lines† 1944	1,097	6,504	335	9.9	20,193 38,483	1.016	456 1,101	30.1	1,554 2,158 2,104	77.5 105.7	3,313	76	110.5
Texas & New Orlèans 1944	1,403 3,518	6,953 17,982	7,601 8,356 21,500 25,700	1.2 2.5	34,704 32,279	2,371 2,175 1,813	941 814	28.4	1,380	69.4	10,757 7,022 7,165	78 87 84	142.4 144.9 152.7
1943	4,266	21,434	25,700	2.0	32,420	1,881	807	29.7	1,218	66.1	,,163	04	136.1

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

tems for the Month of August 1944 Compared with August 1943



Where power factor or voltage conditions are a problem on signal systems, Westinghouse Capacitors offer an economical solution. In shops and roundhouses, too, they generally eliminate the need for heavier line circuits or larger power supply apparatus.

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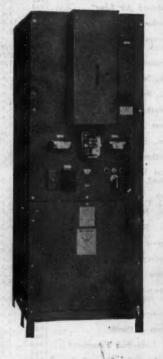
Type FP Capacitors are impregnated with Inerteen, a noninflammable, nonexplosive, insulating medium. Capacitor elements are protected under all conditions by the positive hermetic seal obtained with Soldersealed bushings. The capacitors are free from radio interference, and losses are guaranteed not to exceed 1/3 of 1% of the operating ky-a. Ratings range from 21/2 to 15 kv-a at various distribution voltages either single or three-phase units.

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Limited man power means fewer oil pots, more frozen switches this winter. Faced with this prediction, consideration should be given today to overcoming cold weather hazards with electric track switch heaters. The famous Westinghouse Corox Heaters are by far the most efficient, economical and dependable method of keeping the switches clear. Read booklet B-2173 for the solution—Corox Heaters stay on the job.



The "De-ion" (fuseless) Circuit Breaker is a "must"—now and postwar. This modern method of circuit protection for railroads provides positive "plus" protection, permits maximum loading of circuits, assures faster resumption of interrupted service, guarantees safe operation . . . and lifetime costs are less than any other protective device. "De-ion" Circuit Breakers merit your special attention today.



"Tuffernell" Insulating Materials are just that—Tuffernell—a complete line of tapes, micas, fabrics and papers to keep railroad electrical equipment and apparatus operating at its best—to forestall costly shut-downs and replacements of parts. A copy of Catalog 65-000 and the handy Tuffernell sample pack B-3322 is your convenient index to quality insulating materials. Every repair shop needs this selection data... available on request.



Terminal and repair shop supervisors take note: motors and electrical equipment perform more efficiently when Westinghouse Dry-Type Transformers are located at "load center". Long stretches of heavy, low-voltage lines are eliminated—improved voltage regulation assured—lighting efficiency materially improved and maintenance costs are greatly reduced. For further particulars, request Catalog Section 44-100.



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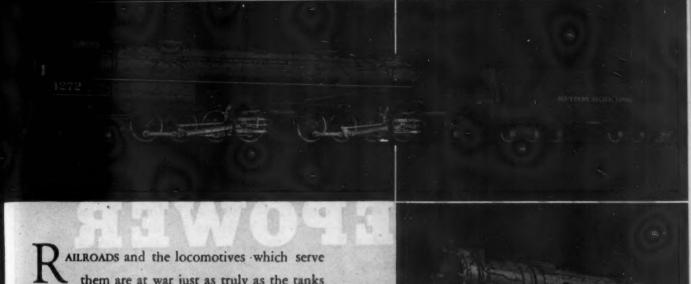
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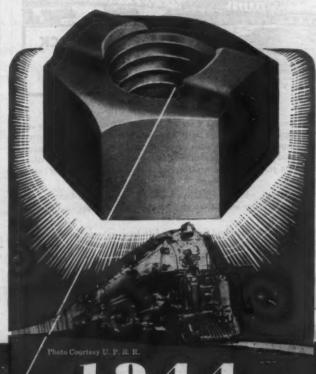
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## th milestone

Today, Grip Nut Company passes its 40th Milestone. Born into the world of Railroading exactly forty years ago, November 4, 1904, the Grip Nut Company is proud of the fact that the Railroad Industry and Grip Nuts have been through forty years of constant improvement and expansion together.

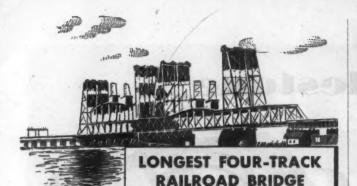
This fortieth milestone is a stepping stone, not a stopping stone. The Grip Nut, with its basically correct design, has been improved to keep pace with the needs of modern railroading, and will continue to be improved to meet the demand for ever-better products.





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November 4, 1944



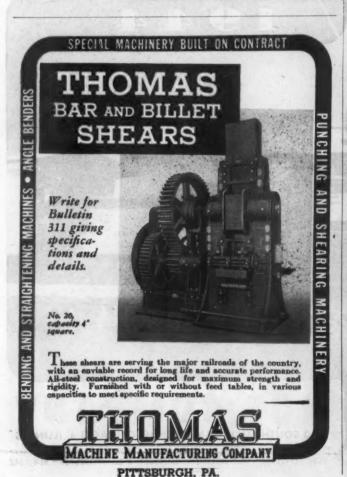
Sypical was the selection, for a second time, of Okonite products for all power and signal circuits, by the Central Railroad of New Jersey. This occurred in the replacement of the old Newark Bay Bridge, still believed to be the longest 4 track railroad bridge and largest drawbridge assembly in the world. Satisfactory service for years on the old structure with Okonite signal wires and cables was the reason

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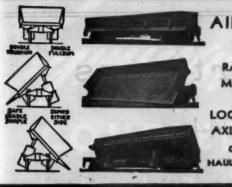
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